APPENDIX D
SEPTEMBER SAMPLING EVENT

APPENDIX D-1
SEPTEMBER SAMPLING EVENT
FIELD DOCUMENTATION

AIR MONITORING INSTALLATION

STATION 4 – 300 Level 9/22 → 9:30 am 10 min

#4 ISS – at entrance

#2 TEMP – inside portal

(Temp3) #3 TEMP – down airstream of shaft

STATION #3 – 700 level portal battery replaced 9/22 10:30 am

#5 TEMP – INSIDE PORTAL (TEMP 2)

#6 TEMP IN canyon

#3 ISS at face of portal 20' outside

9/21/09 placed @ 1513 Battery low station 3, no tripod

#5 is 60 ft inside portal

#6 100 ft outside portal (150 ft)

STATION #2 – 900 foot level

#7 INSIDE PORTAL (Temp #2)

*appears not to be working, changed to station #1

#1 – ISS

installed ~11 am – 11:30 am

Equip. survey <50 for each vehicle

efficiency test for alpha probe
PROBE# 93648
meter# 97282

6588 counts/mi
known activity = 61,?
% = 10.6

9/21/09 Monday 10 hours

* Station #3 installed at PORTAL (700L)
Software problems, hardware problems (#2)
Engine problems
RAD personal surveys completed
Safety Meeting 0700
Set up decon/scan out station, unpack instruments

9/22/09 Tuesday 10 hours

- #STATION 4 adjusted @ 0930 10 min interval - 300 Lev
- 700L COLLECTED 1minute data FROM 9/21 - 9/22
  Replaced battery on station#3
- #2 installed @ OPEN PIT (900 Level)

Safety Meeting 0700

LUNCH Radon Cup OP-R16 collected

SCANNING IMPLEMENTED

- 900L TRANSECTS AT, OP SHIELDED & NON SHIELDED, Flu
- 300L FILL IN - DATA

RAD PERSONAL SURVEYS COMPLETED

9/23/09 WEDNESDAY 12 hours Safety Meeting

0700 * Radon Cups collected total of 29 collected
GPS collected
photos collect

- Volume estimates taken @ various locations
- Asbestos sample collected

* Scanning Completed - 300 L creek, OSA transect
add't transect.

* - Checked AIR MONITORING EQUIPMENT - *

9/22 QC on Rad Equipment

QC strip

Fuji → 27.74 ± 3.10 (MFG-8) beginning 1400
EE → 28.83 ± 3.65 (MFG-1)

Fuji → 27.63 ± 4.41 (MFG-8) end of day 1700
EE → 29.50 ± 4.35 (MFG-1)

9/23 * QC FIELD STRIPS *

Fuji 30.41 (MFG-1) Beginning of day 0800
EE 27.91 (MFG-8)
Fuji 28.86 (MFG-1) END OF DAY 1700
EE 28.32 (MFG-8)

9/24/09 THURSDAY 10 hours SAFETY MEETING

- FLOWS & WQ SAMPLING ALL DAY

RAD personell survey ; ORGANIZED FIELD NOTES
Waste inventory data compilation

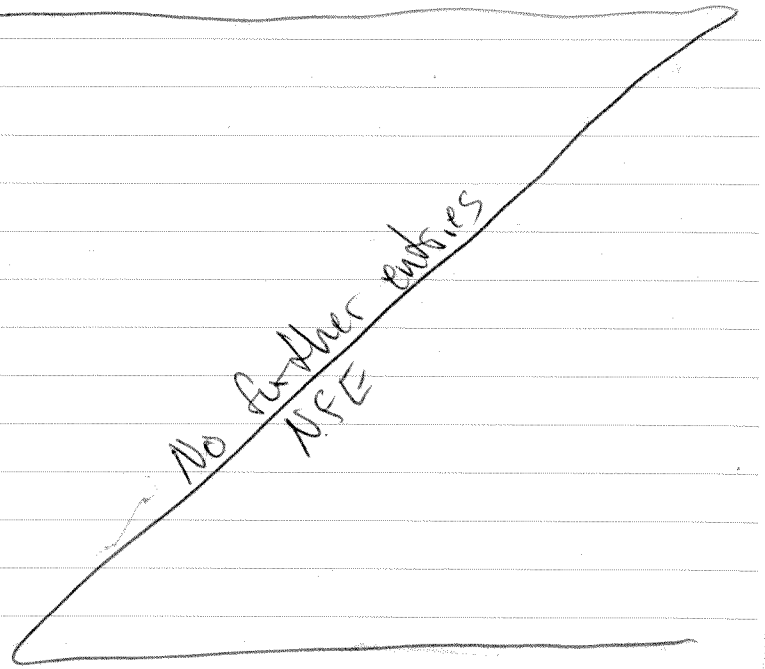
9/25/09 NEW Efficiency test for ALPHA PROBE : Safety Meeting 0830

PROBE 093648
METER 97282

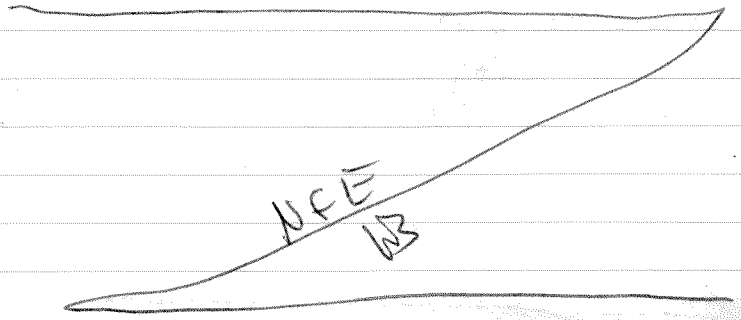
3112 counts per 30 seconds = 6224 c/m
known activity = 61,200 dpm
efficiency (2π) = 10.2%

- Swipe Tests on Kubota and Polaris Vehicle
- Beta probe scan out survey on vehicles
- Tent take down, and de mobilization
- Retrieve AIR MONITORING STATIONS

9
7/18/09 Ross-Adams WB
0530 Arrive Ketchikan. Pick up vehicle & fetch gear from Fedex & mob to boat. Fetch gear from storage & mob to boat. Raining all day. Inventory all gear shipments. All TRS gear, TTEC, AQ, & lab shipments have arrived. Hg bottles have not arrived.
1730 still raining & windy. Will move last load from truck to boat tomorrow.



9
7/19/09
0700 Move final load from truck to boat. Still Raining. Procure final supplies in town including a set of hip waders. Informed Mark Abshire that equipment from Pine Env. has arrived.
1000 Loaded Polaris UTV on boat.
1130 Drop off vehicle, load supplies from town on boat. Depart for Kendrick Bay.
1700 Arrive at Kendrick Bay. There is a crew barge "Cape Chacon" & fishing boat "Blue Gill" tied up at the seley Mooring + 3 skiffs + a helicopter at the Dotsan Dock.



7/20/09 Ross-Adams WB

0700 Calm this morning Dave + Bob from Landmark stopped by this morning to touch base. They are drilling 24/7 w/ 2 crews. We should not be in each others way

1200 Wind + rain really starting to increase. Too windy to set up decon shelter

1400 Attempt to recover well point that we couldn't pull out from 7/28/09 but we cant access it due to tides. The weather has been way too rough for Island Hauler to come out today. The float plane probably won't make it out today either.

1900 No sign of plane or Island Hauler. Bob has told us that they have sighted bears at the worksite.

NFE

7/21/09 Ross-Adams WB

0630 Weather calm w/ no rain. Hopefully crew + gear will arrive today.

0730 Float plane w/ Aaron, Lindsay, + Amy arrives. Make intros, settle in to rooms

0900 Health + safety Brief By Walt Bowles

Attendees; Aaron Orechwa
Lindsay Morabe
Amy Sumner

Topics
Boat protocols, vests, in skiffs
Equipment organization
Slips, trips, falls - dock safety
Communications. We will be on Chn 3; landmark on chn 1
Work schedules
Bear safety / Buddy system
Rain Gear
Hazards in streams
Vehicle safety / Road conditions
Daily H+S briefing
Med data sheet update

9
4/21/09 Ross-Adams WB
H+S can't
Rad safety / Alaska
[illegible] fueling / Decon areas.
Bring stuff back to boat
to dry at site
Distributed Rad badges.
Amy returned hers to Randy
last time so I don't have
a spare for her. Aaron does
not have spare badges so
Amy will remain in close
proximity to him for the
duration.
1000 At WB Assembling met
stations + water sampling
gear.
1045 Island Haulers arriving.
The crew will move the
ATVs to the shore + we
will continue to mobilize
1017 Calibrating Horiba
pH 4.00 T°C 11.5
Cond 4.52 ms/cm ORP 237 mV
Turb 0.1 NTU
DO 11.0 mg/l

9
4/21/09 Ross-Adams WB
Horiba S/N Sonde 7113003
Data Unit 801013
1130 We will have lunch + then
head out to start sampling
1200 Loading boat + heading to
site. We will set up + secure
the decon shelter first
1336 At station CONF-SW-01-KC
We have seen a number of salmon
spawning at this site
1338 Sample CONF-SW-01-KC taken
Water Quality measurements
pH 5.76
Cond 0.33 ms/cm
Turb 0 NTU
DO 11.6
T°C 10.6
FDO 0.02 g/l
ORP 163 mV
WIDTH = 17' Increments @ 0.8'

INCREMENT (FT)	DEPTH (ft)	VELOCITY (FT/S)
0.8	0.45	MARSH MCGURRELY NOT WKING
0.8	—	

1411 - Marsh McGurrey NOT WK. ING
Will continue collecting
samples & will get H2O quality

9/21/09 Ross-Adams WB

Tomorrow.

1415- Dropping Equipment Off @ Next Location + Samples @ Kubota

1430- Returning To Dock To Scan Out + Return To Boat For Supplies

1500- Returned To Confluence To Continue Sampling

1530- arrive Back @ Conf-SW-01-C To Do Flow Measurement

Photo of Site 101-0426.

Increment (FT)	Depth (FT)	Velocity (FPS)
0.0	0.49	
0.8		
1.6		
2.4		
3.2		
4.0		
4.8		
5.6		
6.4		
7.2		
8.0		
8.8		
9.6		

9/21/09 Ross-Adams WB

Increment (FT)	Depth (FT)	Velocity (FPS)
10.4		

1540- Marsh-McGenie Not Working. Moving To Conf-SW-01-C

1550- arrive @ Conf-SW-01-C For Water Quality + H2O Sample

pH 5.93
Cond 0.030 mS/cm
Turb 0.0 NTU
DO 11.5 mg/L
T°C 10.8
TDS 0.02 g/L
ORP 146

Flow meter not working. We will attempt discharge measurements tomorrow

9/21/09 Ross-Adams WB
Picture log for CONF-SW-01-C
101-0427; 101-0428
1615 Getting bottles for next sample
1626 Collecting sample CONF-SW-01-K
pH 6.80
Cond 0.030
Turb 0.0
DO 11.7
T°C 10.5
TDS 0.02
ORP 123
1636 Photos of CONF-SW-01-K
101-430; 101-431
1657 Scanning out
1700 Working on RTV 500 which was overheating. Added water - seems to be running fine now
1730 Back at boat, icing samples, drying gear →

No further entries

09/22/09 Ross-Adams WB
0715 spoke w/ Bruce Marshal He said we will not take a sample from CONF-SW-01-K2 on this trip
0720 Daily H+S briefing
Topics: Weather - rain + wind
Slips trips + falls
vehicle safety
bring water to drink,
Temps are moderate but bring warm clothing
Life vests in skiff
Attendees Aaron Orechwa, Lindsay McCabe, Amy Summer
0730 Breakfast + Mobilize gear
0817 Calibrate Horiba
pH 4.00
Cond 4.49 mS/cm
Turb 0.0 NTU
DO 9.1 mg/l
~~DO~~ WB T°C 20.6
TDS 2.9 ~~mg/l~~ WB s/l
ORP 224 mV
0949 - Arrive @ CONF-SW-01-K For Flow Measurement
PHOTO 0977

09/22/09 Ross Adams LM

WIDTH=27.5' INCREMENT=1.3'

INCREMENT (FT.)	DEPTH (FT)	VELOCITY

0951 - Flow Measurement Not working. Moving back to Dock To Try other Machine

1037 - Returned To CONF-SW-01-K For Flow Measurement

INCREMENT (FT)	DEPTH (FT)	VELOCITY (FT/S)
0.0	0.40	-0.80
1.3	0.70	-0.14
2.6	0.80	2.42
3.9	0.30	1.04
5.2	0.40	2.73
6.5	0.40	1.22
7.8	0.30	1.83
9.1	0.35	1.66
10.4	0.40	1.30
11.7	0.35	3.14
13.0	0.40	2.31
14.3	0.50	1.58
15.6	0.65	2.66
18.9	0.75	1.24
20.2	0.85	1.30
21.5	1.15	3.21
22.8	0.85	3.58
24.1	1.10	2.47

09/22/09 Ross Adams LM

INCREMENT (FT)	DEPTH (FT)	VELOCITY (FT/S)
25.4	1.10	3.72
26.7	1.10	3.43

*VELOCITIES Taken at 0.6 OF THE DEPTH @ ALL LOCATIONS

27.5	1.15	4.56
28.0	0.70	1.67

1107 - Complete @ CONF-SW-01-K. Will attempt to access CONF-SW-01-KC For Flow Measurement

1120 - Arrive @ CONF-SW-01-C For Flow Measurement

WIDTH=24' INCREMENT 1.15'

INCREMENT (FT)	DEPTH (FT)	VELOCITY (FT/S)
0.0	0.20	-0.22
1.15	0.30	-0.20
2.30	0.50	-0.06
3.45	1.00	1.15
4.60	0.80	0.74
5.75	1.20	0.60
6.90	1.25	1.42
8.05	0.90	4.30
9.20	0.90	4.25
10.35	1.45	2.99
11.50	0.95	2.07

09/22/09 Ross Adams LM

Increment	Depth	Velocity
12 ~~1~~.65	0.80	2.04
13 ~~1~~2.80	0.70	2.29
14 ~~1~~3.95	0.15	too shallow to measure
16 ~~1~~4.10	0.30	1.68
17 ~~1~~5.25	0.10	too shallow to measure
18 ~~1~~6.40	0.10	too shallow to measure
19 ~~1~~7.55	0.40	1.05
20 ~~1~~8.70	0.25	0.10
21 ~~1~~9.85	0.35	0.42
23 ~~2~~0.00	0.30	0.47
24 ~~2~~1.15	0.10	too shallow to measure
22.30		
23.45		
24.00		

*WILL redo increment calculations at boat.

1155 - Complete at CONF-SW-01-C Heading to lunch

1258 At SPR-SW-01A collecting samples.

Water Quality readings

pH 5.45 DO 11.7

Cond 0.038 T°C 12.2

Turb 0.4 TDS 0.03

ORP 203mV

9/22/09 Ross-Adams LB

There is measureable flow into + out of the spring. We will measure it

Width = 1.1'

LB z = 0.2 u = 0.23 fps

Center z = 0.2 u = 0.89 fps

RB z = 0.18 u = 0.65

photos 978 + 979

I need to fix the clock on my camera

1330 Moving to 300' level

1345 Preparing to sample at 300' level

1356 Collecting 300L-SW-01A

Water Quality

pH 5.09 T°C 11.1

Cond 0.022ms/cm TDS 0.01g/L

Turb 5.2 NTU ORP 163mV

DO 12.3mg/L

WIDTH = 17.4' Increment = 0.85

Increment (FT)	Depth (FT)	Velocity (FPS)
0.00	0.00	too shallow to measure
0.85	0.30	0.73
1.70	0.50	1.02
2.55	0.45	1.31
3.40	0.50	1.95
4.25	0.80	2.35

9/22/09 Ross-Adams WB

Increment (FT)	Depth (FT)	Velocity (FT/S)
5.10	0.30	0.54
5.95	0.70	2.58
6.80	1.75	1.71
7.65	1.60	2.03
8.50	1.60	0.25
9.35	0.70	0.50
10.20	0.30	0.47
10.95	0.70	1.73
11.90	0.65	1.70
12.75	0.35	1.79
13.60	0.40	1.45
14.45	0.40	1.19
15.30	0.35	0.90
16.15	0.25	0.75
17.00	0.00	TOO SHALLOW TO MEASURE
17.40		

*RIGHT BANK FACING DWN STREAM

START

1447 - COMPLETED 300L-SW-01-A. DROPPING OFF SAMPLES & MOVING TO 300L-SW-01-B PHOTO 0980. TIME FIXED ON CAMERA. PREVIOUS TIMES WERE 1 HR FAST

9/22/09 Ross-Adams WB

1511 Collecting sample 300L-SW-01-B

Water Quality

pH 5.76 TOC 10.7

COND 0.025 TDS 0.02

Turb 4.5 ORP 145

DO 12.2

WIDTH = 4.6' Increment = 0.50'

Increment (FT)	Depth (FT)	Velocity (FT/S)
0.0	0.90	1.21
0.5	0.75	1.64
1.0	0.50	1.82
1.5	1.20	1.24
2.0	1.25	1.32
2.5	1.00	1.38
3.0	0.80	1.08
3.5	0.75	1.07
4.0	0.60	0.97
4.5	0.50	0.94
4.6	0.00	TOO SHALLOW TO MEASURE

*RIGHT BANK START

PHOTO 0981

1557 Collecting sample 300L-SW-01-C

9/22/09 Ross-Adams WB

Water Quality

pH 5.56 T°C 11.6
Cond 0.019 ms/cm TDS 0.01 g/l
Turb 3.1 NTU ORP 166 mV
DO 11.8 mg/l

WIDTH = 5.0' INCREMENT = 0.5'

Increment (FT)	DEPTH (FT)	VELOCITY (FT/S)
0.0	0.75	3.73
0.5	0.70	3.59
1.0	0.60	3.41
1.5	0.55	3.20
2.0	0.45	3.53
2.5	0.35	3.61
3.0	0.30	2.99
3.5	0.25	2.30
4.0	0.20	1.94
4.5	0.15	TOO SHALLOW
5.0	0.10	TO MEASURE

*LF BANK START.

1628 - Complete e 300L-SW-01-C
Back To Kubota To
Process
1647 Collecting sample
300L-SW-OP-D

9/22/09 Ross-Adams WB

Water Quality

pH 6.40 T°C 9.6
Cond 0.043 TDS 0.03
Turb 2.4 ORP 127
DO 12.8

There is a lot of flow coming from the hillside around the portal

1715 - Flow Measurement From Stream coming off of outside of 300L Portal.
WIDTH = 1' Increment = 0.5'

Increment (FT)	DEPTH (FT)	VELOCITY (FT/S)
0.0	0.70	0.02
0.5	0.30	0.34
1.0	0.05	na

1724 Flow measurements from 300' level portal
Width = 1.7 Increment = 0.5'

Increment (ft)	Depth (ft)	Velocity ft/s
F. bank 0	0	0
0.5	0.3	0.45
1.0	0.33	0.32
1.5	0.4	0.36
1.7	0.4	0.33

9/22/09 Ross-Adams WB
1724 Heading to scan out area
Photographs of 300L-SW-01-D
are 0983 + 0984
1800 Back at boat. Icing
samples, sorting coolers.

No further entries
WB

9/23/09 Ross-Adams WB
0715 Daily H+S Brief
Topics: High winds; slips, trips, falls;
Bear sightings; vehicle safety;
rad safety, eye protection,
communication, bug spray. Don't
rush, stay safe
0730 Mobilizing equipment
Calibrating Horiba
pH 4.00 T°C 24.0
Cond 4.50 ms/cm TDS 0.2 g/l
Turb 0.2 NTU ORP 244 mV
DO 8.9 mg/l
0830 On-site, heading to 300' level
0900 Kubota overheating, have to
stop + let cool
0930 Running again
0936 Heading up creek to
700L-SW-01-A
1013 At site collecting sample
700L-SW-01-A
footing is very treacherous w/the
flow. We have gone u/s as far
as it is safe. GPS not working
because of canopy. I estimate
our elevation btwn 650 +
700'

9/23/09 Ross-Adams WB

1020 Heading back down. No flow or WQ measurements because we couldn't carry the equipment up the creek, Photograph 0985

1055 Back at Kubota processing sample

1111 Collecting 3pal-SW-01-E

Water Quality

pH 5.27 T°C 11.1

Cond 0.018ms/cm TDS 0.01g/l

Turb 8.4 ORP 192mV

DO 13.2

WIDTH = 5.0' Increment = 0.50'

Increment (FT)	DEPTH (FT)	VELOCITY (FT/S)
0.0	0.00	CAN'T Measure
0.5	0.35	1.44
1.0	0.30	1.72
1.5	0.20	1.32
2.0	0.25	1.39
2.5	0.40	1.15
3.0	0.50	1.13
3.5	0.55	1.08
4.0	0.65	1.13
4.5	0.65	1.09
5.0	0.65	1.26

*RIGHT BANK START

9/23/09 Ross-Adams WB

Photograph 0986

1145 Heading back to scan out then to boat for lunch, warm up + label bottles

1350 Heading back to shore

1426 - arrive @ CONF-SW-01-KC

FOR FLOW Measurement

WIDTH = 16.6' Increment = 0.8'

Increment (FT)	DEPTH (FT)	VELOCITY (FT/S)
0.0	0.30	0.14
0.8	0.55	0.73
1.6	0.65	0.76
2.4	0.60	0.75
3.2	0.90	1.18
4.0	1.00	1.00
4.8	1.20	1.10
5.6	1.30	1.16
6.4	1.50	1.52
7.2	1.55	1.61
8.0	1.45	1.48
8.8	1.20	1.45
9.6	1.20	1.35
10.4	1.10	1.16
11.2	1.00	0.96
12.0	0.85	0.86
12.8	0.55	0.59

9/23/09 Ross-Adams WJ

Increment (FT)	Depth (FT)	Velocity (FT/S)
13.6	0.65	0.08
14.4	0.60	0.47
15.2	0.55	0.48
16.0	0.30	-0.03
16.6	0.00	0.00

*LF. Bank START

1500 Back at Kubota, heading for 900' level

1530 At 900' level collecting WQ

900L-SW-01-A

1535 collecting field dup. pH 5.46 Tºc 10.4
900L-SW-02-A Cond 0.019 TDS 0.01
Turb 5.9 ORP 177
DO 12.7

Flow measurements

Width = ~~2.7~~ 3.0'

Increment = 0.5'

Increment (ft)	Depth (ft)	Velocity ft/s
RB	0.2	0.16
0.5	0.2	1.75
1.0	0.25	1.26
1.5	0.5	2.66
2.0	0.25	2.69
2.5	0.25	2.15
3.0 (LB)	0.20	1.08

Photographs 0987, 0988

9/23/09 Ross-Adams WJ

1550 Heading for next site

1605 Collecting 900L-SW-01-B

Water Quality PHOTO 9989

pH 5.16 Tºc 9.7

Cond 0.019 ms/cm TDS 0.01 g/l

Turb 0.05 NTU ORP 193mV

DO 12.4 mg/l

WIDTH = 3.0' Increment = 0.5'

Increment (FT)	Depth (FT)	Velocity (FT/S)
0.0	0.20	-0.12
0.5	0.30	0.01
1.0	0.30	0.53
1.5	0.35	0.68
2.0	0.35	0.51
2.5	0.40	0.05
3.0	0.30	0.06
~~3.5~~	RIGHT Bank START	
~~4.0~~		

1635 Collecting 900L-SW-01-C

Water Quality

pH 5.93 Tºc 10.3

Cond 0.020 TDS 0.01

Turb 0.0 ORP 174

DO 12.3

WIDTH = 4.0' Increment = 0.6'

9/23/09 Ross-Adams WB

Increment (Ft)	Depth (Ft)	Velocity (Ft/s)
0.0	0.20	0.47
0.5	0.40	-0.02
1.0	0.30	0.21
1.5	0.40	0.07
2.0	0.6	0.86
2.5	0.6	1.60
3.0	0.6	1.96
3.5	0.20	0.35
4.0	0.16	Too silty to measure

*LF. Bank START
Photograph 990
1510 finished at this site
Heading to Ocean to scan out
1530 Heading back to boat to dry + stow gear
1550 Packing samples on ice.

No further entries
WB

9/24/09 Ross-Adams WB
0705 H+S Briefing
Topics: slips, trips, falls; cooler temps; safety entering open pit; still some sketchy areas on the dock. Bring water for Kubota. Keep towels in Polaris for defogger. Remember the buddy system. Stay in comms w/radios. Wear PFE even if you feel safe w/out it
Attendees: Tasca Ozechwa, Amy Sumner, Lindsay Macabe
0745 Calibrating Horiba

pH	4.00	T°C	22.0
Cond	4.49 ms/cm	TDS	2.9 g/l
Turb	0.1 NTU	ORP	252 mV
DO	8.8 mg/l		

Cal complete. Mobilizing remaining gear
0838 Mobilizing gear to shore.
1010 Collecting WQ + flow data at 900L-SW-01-D. On the way here we stopped to talk w/Susan Dotson about the site.

NFE WB

9/24/09 Ross-Adams WB

WQ Parameters 1010

pH 5.22 °C 9.9

Cond 0.023 mS/cm TDS 0.01 g/l

Turb 13.5 NTU ORP 211 mV

DO 12.9 mg/l

Flow measurements

Width = 2' increment = 0.5'

Increment (ft)	Depth (ft)	Velocity ft/s
left Bank	0.40	1.07
0.5	0.45	1.14
1.0 ASO	0.50	0.09
1.5	0.70	0.09 ASO
Right Bank	0.60	

Rocks needed to be removed from Velocity/flow path. Flow measurements collected again -ASO

INCREMENT (ft)	DEPTH (ft)	VELOCITY (ft/s)
LEFT BANK	0.40	0.92
0.5	0.45	1.43
1.0	0.50	0.76
1.5	0.65	-0.14
RIGHT BANK	0.60	-0.20

LEFT 900L-01-SW1D @ 1035

ASO

9/24/09 Ross-Adams WB

1109 Collecting WQ + flow measurements at North end of open pit 900-SW-01

Water Quality E

pH 5.29 °C 9.4

Cond 0.028 TDS 0.02

Turb 4.2 ORP 184

DO 13.3

flow is too small to measure w/ Marsh-McBirney. Visual estimate by WB + AO is 2 gpm.

Coordinates at this point are

N 1127030

E 3007419

Z 961

1131 At south end of open pit Collected GPS at this spot w/ trimble.

Water Quality

pH 5.47 °C 9.9

Cond 0.028 TDS 0.02

Turb 0.9 ORP 175 mV

DO 12.5

flow is too small to measure w/ Marsh McBirney. AO + WB visually estimate flow at 2.5 gpm.

9/24/09 Ross-Adams WB

There is a small waterfall ~~at~~ above the portal heading to the 700' level. Visual estimate by WB + AO is ~1.5gpm

Coordinates at S. End open pit

N 1126768
E 3007435
Z 945

Photographs

0991 ~~North~~ South end ~~of~~ open pit
0992 Waterfall at South end
0993 North end of open pit
1206 Heading to 700' level
1215 At 700L-SW-01-B for WQ + flow measurements.
Photograph 994

Water Quality

pH 5.56	T°C 10.7
Cond 0.023 ms/cm	TDS 0.01g/l
Turb 0.1 NTU	ORP 146mV
DO 11.9 mg/l	

flow is too small to measure w/ Marsh-McBirney. Visual estimate by AO + WB is 5-10gpm
1220 Heading back to decon area

9/24/09 Ross-Adams WB

This morning we had 2 teams collecting Stream Data. 1 team collected water samples, the 2nd team collected flow data & water quality data. The Collection times for todays water samples are

900L-SW-01-D	0948
900L-SW-01-E	1015
900L-SW-01-F	1040
700L-SW-01-B	1115

1300 Scanned out heading back to boat.
1400 Informed that we will not be collecting marine sediment samples. Will try to get Island hauler here a day earlier to get the ATV's back. Will also try to reschedule the floatplane for Amy + Aaron.
1415 Filling out COCs + organizing samples + gear for shipment + demob respectively.

NFE WB

9/25/09 Ross-Adams WB:

0830 H+S Briefing

Topics: slips, trips, falls: Bad weather- wear adequate clothing. Dock is still unsafe in places.

~~AS~~ Attendees Lindsay Marabe, Amy Sumner, Aaron Orcchuya.

↳ Slippery deck on boat; High winds affecting balance. Kubota needs coolant. Take extra care in open pit + practice ALARA.

~~To WB~~ 1830 spent the day de-mobilizing the site, pulling down the weather stations w/ Aaron + touring the site w/ Susan Dotson to look at stuff she claims was left by Newmont.

No further entries

WB

9/26/09 Ross-Adams WB

0730 H+S Briefing

Topics: Lifting w/ legs not back slips, trips falls getting in + out of float plane.

0800 float plane arrives; AO + AS depart

→ Attendees: Aaron Orcchuya, Amy Sumner, Lindsay Marabe.

1000 Island Hauler arrives to transfer UTVs

1200 Depart for Ketchikan

1700 Arrive in Ketchikan, add more ice to coolers. Pack more coolers w/ gear.

No further entries

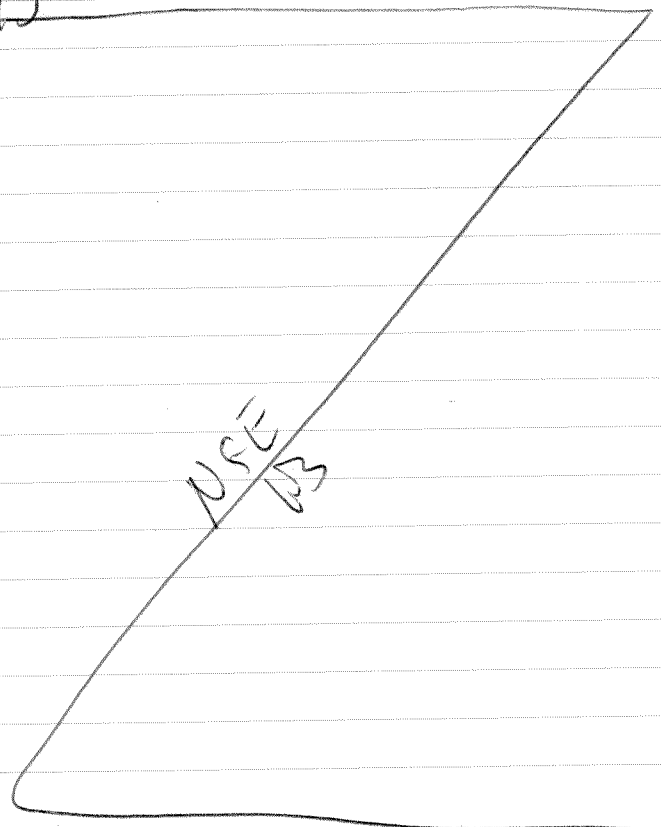
WB

9/27/09 Ross-Adams WB

0630 Lindsay Mracle departs. Change out ice in coolers & seal them

0930 Deliver coolers to Cold Streak & head to storage locker to retrieve gear.

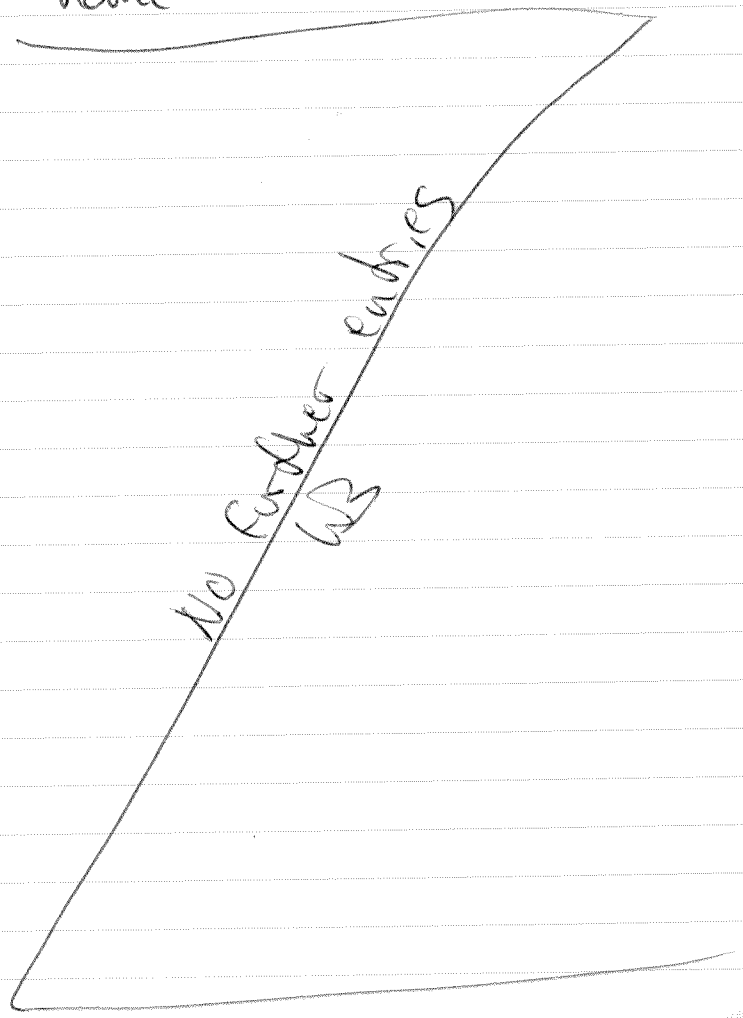
1100 Load remaining gear from locker into truck & fill w/gear from boat.



9/28/09 Ross-Adams WB

~~0800~~ WB 0700 Pull Gear from Crane hold & start talking to feder

1130 Head to airport & fly home



APPENDIX D-2
SEPTEMBER SAMPLING EVENT
PHOTOGRAPHIC LOG



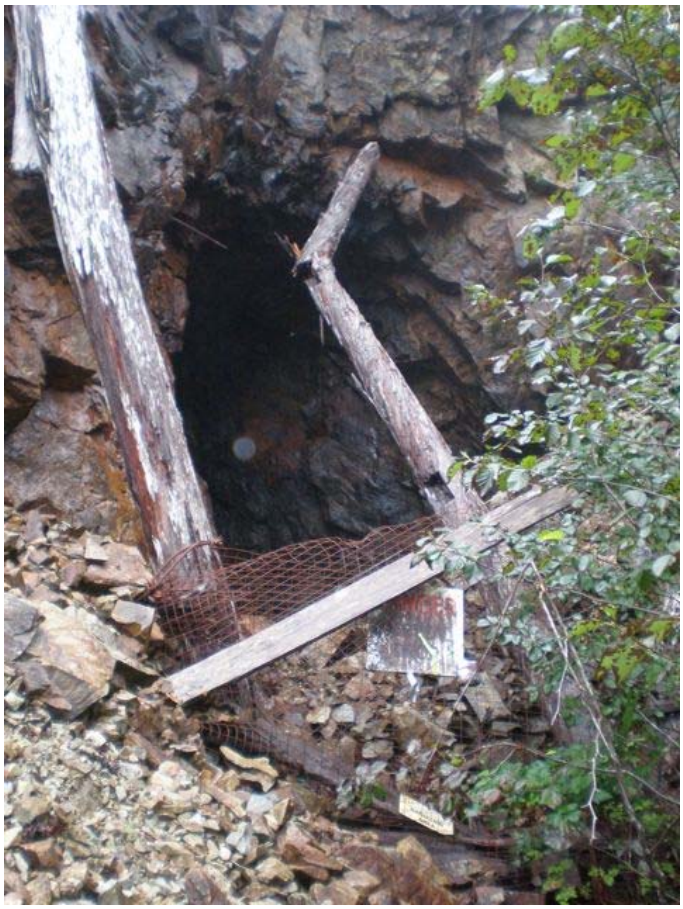
Field Personnel Performing GPS-Based Backpack Gamma Survey



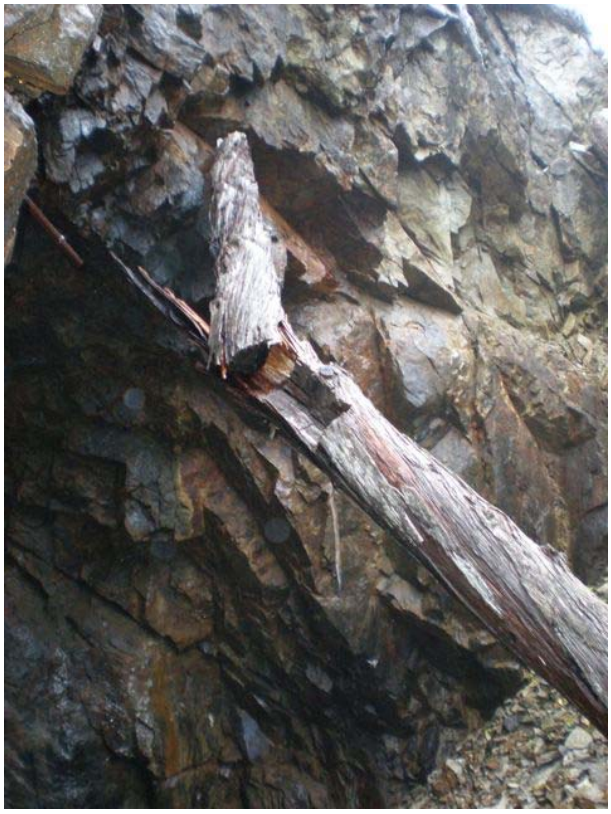
Field Personnel Performing GPS-Based Backpack Gamma Survey



Waterfall Entering the Open Pit on the South End



"Widow Maker" at 900-Foot Level Portal



900-Foot Level Portal in the Open Pit



Air Monitoring Station at 900-Foot Level



Air Monitoring Station at the 300-Foot Level Portal



Water Quality Collection team at UTV



Water Quality Parameter Collection



M/V Crane



Onboard the M/V Crane



Landmark Helicopter



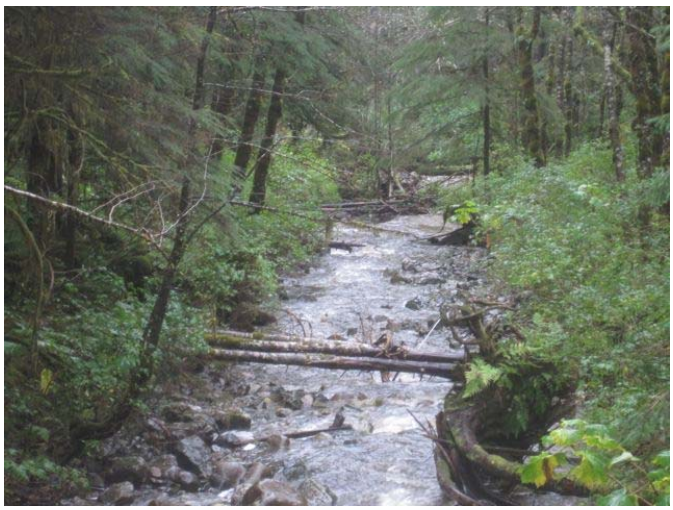
Landmark Helicopter and Pad



Sample Location CONF-SW-01-KC: Surface Water Sample



Sample Location CONF-SW01-C: Surface Water Sample



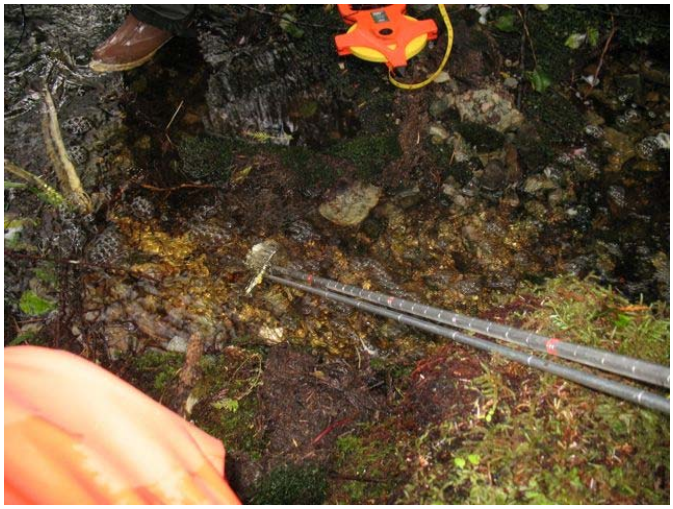
Sample Location CONF-SW01-C: Surface Water Sample



Sample Location CONF-SW01-K: Surface Water Sample



Sample Location 300L-SW01-K: Surface Water Sample



Sample Location SPR/SW/01/A: Surface Water Sample



Sample Location SPR/SW/01/A: Surface Water Sample



Sample Location 300L-SW01-A: Surface Water Sample



Sample Location 300L-SW01-B: Surface Water Sample



Sample Location 300L-SW01-B: Surface Water Sample



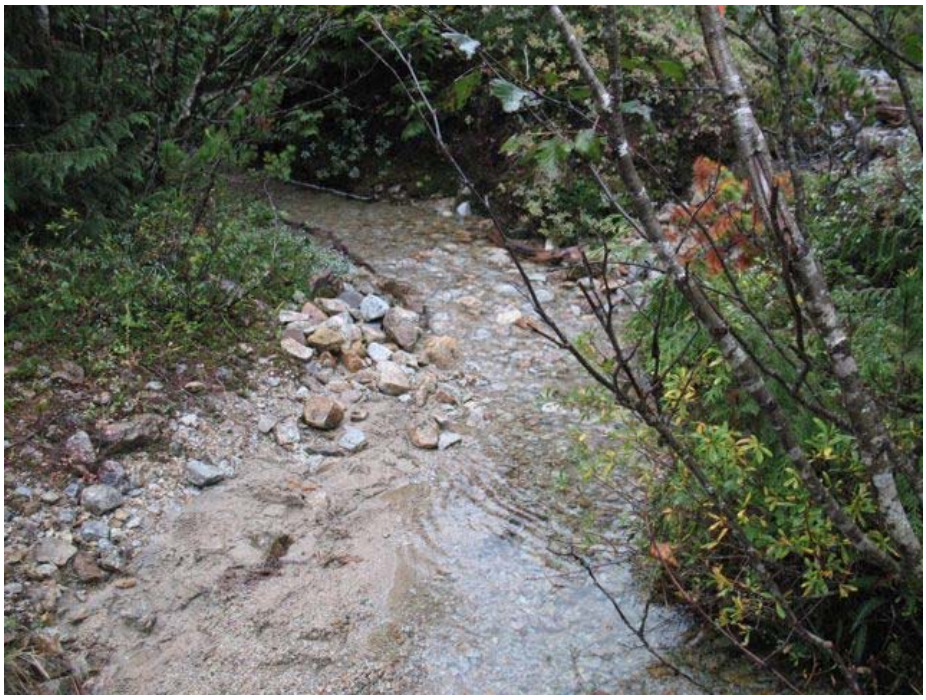
Sample Location 300L-SW01-C: Surface Water Sample



Sample Location 300L-SW01-A: Surface Water Sample



Sample Location 900L-SW01-A: Surface Water Sample



Sample Location 900L-SW01-B: Surface Water Sample



Sample Location 900L-SW01-C: Surface Water Sample



Sample Location 900L-SW01-F: Surface Water Sample



Sample Location 900L-SW01-E: Surface Water Sample



Sample Location 700L-SW01-B: Surface Water Sample



Radon Station 900L-RAD-20: Radon Station at the 900 Level Air Shaft



Radon Station 300L-RAD-30: Radon Station Collection at 300 Foot Level Portal



Radon Station 300L-RAD-29: Water Damaged Radon Monitoring Device

APPENDIX D-3
SEPTEMBER SAMPLING EVENT
DATA QUALITY EVALUATION

Third Event Data Validation Summary

Tetra Tech reviewed all metals, radiochemical, and inorganic analyses from ALS Laboratory Group (ALS), in Fort Collins, CO, according to the project QAPP (Tetra Tech 2009). The results included analysis of water samples from the September 2009 sampling event.

The sample receipt was reviewed, including preservation and holding times and chain of custodies. The shipping cooler temperatures were within the recommended temperature range (4 +/- 2 °C). All analyses were within the recommended holding times, except water TDS and TSS, which exceeded the holding times for some samples by only 1-2 days. No samples were qualified as a result of preservation or holding time exceedances.

Laboratory method blanks, laboratory control samples (LCS) matrix spike samples (MS) and laboratory duplicate samples, were verified according to USEPA CLP (2004) for inorganic parameters and the radiological parameters according to MARLAP (2004).

Water data for which both total/total recoverable and dissolved metals analyses were performed were compared. Out of 120 total sample sets (16 samples x 5 metals + 2 samples X 20 metals), 31 had dissolved values greater than the total for the same sample, representing 26% of the samples. For those samples, a control limit of two times the reporting limit was utilized to assess the absolute difference between the sample results when one or both sample results were less than five times the reporting limit (MDC), otherwise a relative percent difference (RPD) was applied, using 10% RPD as a limit. Fifteen of the 31 samples exceeded the limits, representing 48.4% of the total samples. However, 27 of the 31 had results under the reporting limit (B qualified); and of the 15 that exceeded limits, 12 of those were below the reporting limit.

Precision

Precision is a measure of the degree to which two or more measurements are in agreement. Determining the agreement among replicate measurements of the same sample assesses the precision of the analytical method; combined precision of sampling and analysis methods is assessed from the agreement between measurements of field duplicate samples.

Water Analysis

Laboratory precision for radionuclide analyses was based on either the analytical duplicate Relative Error Ratios (RERs) or LCS/LCSD RERs. ALS used the terminology DER (Duplicate Error Ratio) in place of RER. DERs were within control limits for all analyses.

Laboratory precision for metals and inorganic analyses was based on Matrix Spike/Matrix Spike Duplicate (MS/MSD) or LCS/LCSD Relative Percent Difference (RPD). Relative Percent Differences (RPDs) were within control limits for all analyses.

Field QC samples were also assessed following the procedure described in Section 3.5.1 of the QAPP. Field duplicates were evaluated as follows: a control limit of two times the reporting limit was utilized to assess the absolute difference between the sample results when one or both sample results were less than five times the reporting limit, otherwise a relative percent difference (RPD) was applied, using 35% as a limit. Field duplicate comparisons were within control limits for all analyses.

Finally, one sample in SDG 0909294 had serial dilutions greater than control limits (>10%) for calcium and sodium. Per USEPA CLP guidance, this sample is qualified as estimated ("J") for these two analytes.

Accuracy

Accuracy is the degree of agreement between an observed value and an accepted reference or true value.

Water Analysis

The accuracy of the laboratory data was evaluated based on the method blank results, LCS recovery results, and MS/MSD recovery results.

Method blanks were all below the MDC/MDLs, with the following exceptions:

- Metals EPA 200.7 Prep Batch IP0911002-4 QC Batch IP0911002-4-1: Aluminum, Calcium, Magnesium, Manganese, Sodium, and Zinc
- Metals EPA 200.7 Prep Batch IP0911002-1 QC Batch IP0911002-1-1: Aluminum, Magnesium, and Zinc
- Metals EPA 200.8 Prep Batch IP0911002-4 QC Batch IP0911002-4-2: Cadmium, Copper, Lead, Nickel, Silver, Uranium, and Beryllium
- Metals EPA 200.8 Prep Batch IP0911002-1 QC Batch IP0911002-1-2: Cadmium and Uranium
- Radium-226 (SDG 0909293)
- Thorium-232 (SDG 0909294)

All data associated with these method blanks that had concentrations less than or equal to the reporting limit, but greater than or equal to the MDL, are qualified as "U" and the values were raised to the Reporting Limit, as per USEPA CLP guidance. The data associated with the Ra-226 Method Blank is not qualified as the exceedance was minor.

Percent recoveries were all within control limits for the LCS, MS and MSD results, with the exception of Radium-228 in SDG 0909294. The LCS recovery was below the lower project control limits, and therefore all associated samples are qualified as "S-", as per MARLAP guidance. Additionally, one sample had chemical yields below control limits for U-234, -235, and -238, and was therefore assigned a "J" qualifier.

Completeness

Completeness was evaluated by confirming that analytical results were reported for all samples submitted, and that all results were usable as reported, with areas of concern with respect to any data quality noted in the Data Validation Reports.

Table 1. Third Sampling Event Data Validation Qualifiers

Inorganic Data (Based on CLP Guidance)	
Qualifier	**Description**
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Radionuclide Data (Based on MARLAP Guidance)	
Qualifier	**Description**
J	An unusually uncertain or estimated result.
S	A result with a related spike result (LCS, MS, or MSD) that is outside the control limit for recovery (%R); S- used to indicate low recovery.

Table 2. Third Sampling Event Laboratory Sample Delivery Groups (SDGs)

SDG	Number of Samples	Matrix
0909293	9	Surface Water
0909294	9	Surface Water

SURFACE WATER

MEMORANDUM

TO: **Keir Craigie, Inorganics Quality Assurance Manager**
Tetra Tech, Inc. - Bothell, WA

FROM: **Tymeri Schleicher**
Tetra Tech MM - Fort Collins, CO

DATE: **December 10, 2009**

SUBJECT: **Inorganics and TOC Data Validation – Ross Adams Site September 2009 Sampling**

ATTACHMENT: **ADEC Laboratory Data Review Checklists**

Project #: 181862
Lab Report #: 0909293

Water Sample IDs

CONF-SW-01-KC	CONF-SW-01-C	CONF-SW-01-K
SPR-SW-01-A	300L-SW-01-A	300L-SW-01-B
300L-SW-01-C	300L-SW-01-E	700L-SW-01-A

QC Samples
Field Blank: None

Overview: Sample Handling and Analyses
--Nine surface water samples collected on 9/21/09 – 9/23/09 were sent for analysis to Paragon Analytics (ALS Laboratory Group) in Fort Collins, Colorado.

--Received cooler temperature range was approximately 0.6 – 4.4 degrees C (recommended temps are 4 +/- 2 degrees C). The lab noted that the samples were correctly preserved for analysis.

--The samples were analyzed within holding times, except for pH, Specific Conductance, TDS, and TSS. Both pH and Specific Conductance were analyzed outside of their holding times, which are immediate, but field parameters included pH and Specific Conductance.

--Chain of Custodies were complete, and samples were analyzed by the indicated analysis methods, which included: Total Organic Carbon by EPA Method 415.1, Total Alkalinity as CaCO3, Bicarbonate as CaCO3, and Carbonate as CaCO3 by EPA310.01, pH by EPA 150.1, Specific Conductance in Water by EPA 120.1, Total Dissolved Solids (TDS) by EPA 160.1, Total Suspended Solids (TSS) by EPA 160.2, and Chloride and Sulfate by EPA 300.0. The method used for TOC (EPA 415.1) differs from the requested method SM 5310B, but there is not a significant difference between the two methods. The method used for Total Alkalinity as CaCO3 (EPA 310.1) differs from the method requested in the QAPP (SM 2320B). The method used for Sulfate (EPA 300.0 Revision 2.1) differs from the method requested in the QAPP (375.3 Gravimetric). Bicarbonate as CaCO3 and Carbonate as CaCO3 did not have requested analysis methods. In addition, pH and Specific Conductance were analyzed by the laboratory, as requested by Tetra Tech via telephone.

--One field duplicate was submitted with the samples, but were not analyzed in this report; it was analyzed in SDG 0909294.

--Requested detection limits were met for all analyses except Total Alkalinity as CaCO3 and Total Dissolved Solids. Total Alkalinity as CaCO3 had a requested reporting limit of 2 mg/L and an actual reporting limit of 5 mg/L. TDS had a requested reporting limit of 10 mg/L, and an actual reporting limit of 20 mg/L (Total Alkalinity and TDS analyses do not have an associated MDL). However, these elevated reporting limits were previously determined to be adequate by Gary Drendel (Tetra Tech). Additionally, Bicarbonate as CaCO3 and Carbonate as CaCO3 did not have specific requested reporting limits.

Total Organic Carbon (TOC)

Accuracy

The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blank: The target compound was not detected at or above the detection limit in the method blank for the TOC analysis.

--LCS/LCSD Recoveries: One LCS sample was run for TOC; the LCS recovery was within control limits.

Precision

-- Laboratory precision was based on the LCS/LCSD RPD. The RPD was within control limits (<20 RPD) for LCS/LCSD TOC.

--No field duplicates were evaluated in this report.

Completeness

Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Inorganics

Accuracy

The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blank: One method blank each was run for Bicarbonate as CaCO3, Carbonate as CaCO3, Total Alkalinity as CaCO3, Total Dissolved Solids, Total Suspended Solids, and Ion Chromatography (Chloride and Sulfate). The target compounds were not detected at or above the detection limit in the method blanks for the analyses.

--LCS Recoveries: One LCS sample each was run for Total Alkalinity as CaCO3, Total Dissolved Solids, Total Suspended Solids, and Ion Chromatography (Chloride and Sulfate); the LCS recoveries were all within control limits.

Precision

-- Laboratory precision was based on the LCS/LCSD RPDs and Duplicate Sample RPDs. One LCS/LCSD was run for Total Suspended Solids. The duplicate selected was sample CONF-SW-01-KC. One duplicate sample was run for pH, Specific Conductance in Water, and Total Dissolved Solids. RPDs were within project control limits (<20 RPD) for MS/MSD and Duplicate Sample Results (<20 RPD)

analyses. The pH RPD is 0.2 pH units; therefore, the pH duplicate samples were within project control limits as well.

--No matrix spikes were prepared in this analysis.

--No field duplicates were evaluated in this report.

Completeness

Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Notes

Samples CONF-SW-01-KC, CONF-SW-01-C, and CONF-SW-01-K were analyzed three days out of the holding time for Total Dissolved Solids and Total Suspended Solids analysis. Samples SPR-SW-01-A, 300L-SW-01-A, 300L-SW-01-B, 300L-SW-01-C, and 300L-SW-01-E were analyzed two days out of the holding time for Total Dissolved Solids and Total Suspended Solids analysis. Sample 700L-SW-01-A was analyzed one day out of the holding time for Total Dissolved Solids and Total Suspended Solids analysis. Tymeri Schleicher (Tetra Tech) was notified, and the analysis was allowed to proceed. As the holding time exceedance was minor, this data is considered to be usable.

MEMORANDUM

TO: **Keir Craigie, Inorganics Quality Assurance Manager**
Tetra Tech, Inc. - Bothell, WA

FROM: **Tymeri Schleicher**
Tetra Tech MM - Fort Collins, CO

DATE: **December 10, 2009**

SUBJECT: **Inorganics and TOC Data Validation – Ross Adams Site September 2009 Sampling**

ATTACHMENT: **ADEC Laboratory Data Review Checklists**

Project #: 181862
Lab Report #: 0909294

Water Sample IDs

300L-SW-01-D	900L-SW-01-A	900L-SW-01-B
900L-SW-01-C	900L-SW-01-D	900L-SW-01-E
900L-SW-01-F	700L-SW-01-B	

QC Samples
Field Blank: 900L-SW-02-A (Duplicate of Sample 900L-SW-01-A)

Overview: Sample Handling and Analyses
--Eight surface water samples collected on 9/23/09 – 9/24/09 plus one field QC sample were sent for analysis to Paragon Analytics (ALS Laboratory Group) in Fort Collins, Colorado.

--Received cooler temperature range was approximately 1.2 – 4.8 degrees C (recommended temps are 4 +/- 2 degrees C). The samples were correctly preserved for the analysis.

--The samples were analyzed within holding times, except for pH, Specific Conductance, TDS, and TSS. Both pH and Specific Conductance were analyzed outside of their holding times, which are immediate, but field parameters included pH and Specific Conductance.

--Chain of Custodies were complete; the lab noted sample 900L-SW-02-A had 2 different sampling times on each sample bottle (1530 and 1535).

--Samples were analyzed by the indicated analysis methods, which included: Total Organic Carbon by EPA Method 415.1, Total Alkalinity as CaCO3, Bicarbonate as CaCO3, and Carbonate as CaCO3 by EPA310.01, pH by EPA 150.1, Specific Conductance in Water by EPA 120.1, Total Dissolved Solids (TDS) by EPA 160.1, Total Suspended Solids (TSS) by EPA 160.2, and Chloride and Sulfate by EPA 300.0. The method used for TOC (EPA 415.1) differs from the requested method SM 5310B, but there is not a significant difference between the two methods. The method used for Total Alkalinity as CaCO3 (EPA 310.1) differs from the method requested in the QAPP (SM 2320B). The method used for Sulfate (EPA 300.0 Revision 2.1) differs from the method requested in the QAPP (375.3 Gravimetric). Bicarbonate as CaCO3 and Carbonate as CaCO3 did not have requested analysis methods. In addition,

pH and Specific Conductance were analyzed by the laboratory, as requested by Tetra Tech via telephone.

--One field blank was submitted with the samples and analyzed this report.

--Requested detection limits were met for all analyses except Total Alkalinity as CaCO3 and Total Dissolved Solids. Total Alkalinity as CaCO3 had a requested reporting limit of 2 mg/L and an actual reporting limit of 5 mg/L. TDS had a requested reporting limit of 10 mg/L, and an actual reporting limit of 20 mg/L (Total Alkalinity and TDS analyses do not have an associated MDL). However, these elevated reporting limits were previously determined to be adequate by Gary Drendel (Tetra Tech). Additionally, Bicarbonate as CaCO3 and Carbonate as CaCO3 did not have specific requested reporting limits.

Total Organic Carbon (TOC)

Accuracy

The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blank: The target compound was not detected at or above the detection limit in the method blank for the TOC analysis.

--LCS/LCSD Recoveries: One LCS sample was run for TOC; the LCS recovery was within control limits.

Precision

-- Laboratory precision was based on the LCS/LCSD RPD. The RPD was within control limits (<20 RPD) for LCS/LCSD TOC.

--The field duplicates were evaluated as follows: a control limit of two times the reporting limit was utilized to assess the absolute difference between the sample results when one or both sample results were less than five times the reporting limit (MDC), otherwise a relative percent difference (RPD) of 35 % was applied. Field precision was measured for the field duplicate of sample 900L-SW-02-A. Comparison of the field duplicate fell within limits for the analysis.

Completeness

Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Inorganics

Accuracy

The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blank: One method blank each was run for Bicarbonate as CaCO3, Carbonate as CaCO3, Total Alkalinity as CaCO3, Total Dissolved Solids, Total Suspended Solids, and Ion Chromatography (Chloride and Sulfate). The target compounds were not detected at or above the detection limit in the method blanks for the analyses.

--LCS Recoveries: One LCS sample each was run for Total Alkalinity as CaCO3, Total Dissolved Solids, Total Suspended Solids, and Ion Chromatography (Chloride and Sulfate); the LCS recoveries were all within control limits.

Precision

-- Laboratory precision was based on the LCS/LCSD RPDs and Duplicate Sample RPDs. One LCS/LCSD was run for Total Suspended Solids. The duplicate selected was sample 300L-SW-01-D. One duplicate sample was run for pH and Specific Conductance in Water. RPDs were within project control limits (<20 RPD) for LCS/LCSD and Duplicate Sample Results (<20 RPD) analyses. The pH RPD is 0.2 pH units; therefore, the pH duplicate samples were within project control limits as well.

--A matrix spike was prepared for Ion Chromatography (chloride and sulfate). Both MS recoveries were within control limits.

--The field duplicates were evaluated as follows: a control limit of two times the reporting limit was utilized to assess the absolute difference between the sample results when one or both sample results were less than five times the reporting limit (MDL), otherwise a relative percent difference (RPD) of 35 % was applied. Field precision was measured for the field duplicate of sample 900L-SW-02-A. Comparison of the field duplicate fell within limits for all analyses.

Completeness

Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Notes

Samples 300L-SW-01-D, 900L-SW-01-A, 900L-SW-02-A, 900L-SW-01-B, and 900L-SW-01-C were analyzed one day out of the holding time for Total Dissolved Solids and Total Suspended Solids analysis. Tymeri Schleicher (Tetra Tech) was notified, and the analysis was allowed to proceed. As the holding time exceedance was minor, this data is considered to be usable.

Laboratory Data Review Checklist

Completed by:	Tymeri Schleicher
Title:	Environmental Scientist
Date:	December 10, 2009
CS Report Name:	Inorganics and Total Organic Carbon
Report Date:	October 19 & 22, 2009
Consultant Firm:	Tetra Tech
Laboratory Name:	Paragon Analytics (ALS Laboratory Group)
Laboratory Report Number:	0909293 & 0909294
ADEC File Number:	
ADEC RecKey Number:	

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☒ Yes ☐ No Comments:

   ALS Laboratory Group is ADEC CS approved for BTEX and total volatile chlorinated solvents for water and soil. ALS is also ADEC approved for gross alpha and gross beta analysis of drinking water, and NELAP approved for analysis of water and soil samples taken for SDWA, CWA, and/or RCRA monitoring.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   ☐ Yes ☐ No Comments:

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   ☒ Yes ☐ No Comments:

   b. Correct analyses requested?

☒ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☒ Yes ☐ No Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No Comments:

The lab noted the samples were correctly preserved

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☒ Yes ☐ No Comments:

A discrepancy was noted in sampling time of Sample 900-L-SW-02-A

e. Data quality or usability affected? Explain.

Comments:

No

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☒ Yes ☐ No Comments:

c. Were all corrective actions documented?

☒ Yes ☐ No Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

None

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☉ Yes ☐ No Comments:

b. All applicable holding times met?

☐ Yes ☉ No Comments:

pH, Specific Conductance, TDS, and TSS were analyzed outside of holding times.

c. All soils reported on a dry weight basis?

☐ Yes ☐ No Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☐ Yes ☉ No Comments:

Note, the reported MDLs were less than or equal to the requested MDLs with the exception of Total Alkalinity and TDS.

e. Data quality or usability affected?

Comments:

No

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☉ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☉ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No Comments:

N/A

v. Data quality or usability affected? Explain.

Comments:

No

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

N/A

vii. Data quality or usability affected? (Use comment box to explain)
Comments:

No

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☐ Yes ☒ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☐ No Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☐ Yes ☐ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

iii. All results less than PQL?

☐ Yes ☐ No Comments:

iv. If above PQL, what samples are affected?

Comments:

v. Data quality or usability affected? Explain.

Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☑ Yes ☐ No Comments:

ii. Submitted blind to lab?

☑ Yes ☐ No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☑ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

N/A

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☒ Yes ☒ No ☐ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

N/A

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? Explain.

Comments:

No

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☒ Yes ☐ No Comments:

MEMORANDUM

TO: **Keir Craigie, Inorganics Quality Assurance Manager**
Tetra Tech, Inc.- Bothell, WA

FROM: **Tymeri Schleicher**
Tetra Tech MM - Fort Collins, CO

DATE: **December 10, 2009**

SUBJECT: **Metals Data Validation – Ross Adams Site September 2009 Sampling**

ATTACHMENT: **ADEC Laboratory Data Review Checklist**

Project #: 181862
Lab Report #: 0909293

Water Sample IDs

CONF-SW-01-KC	CONF-SW-01-C	CONF-SW-01-K
SPR-SW-01-A	300L-SW-01-A	300L-SW-01-B
300L-SW-01-C	300L-SW-01-E (Total only)	700L-SW-01-A
300L-SW-01-D (Dissolved only)		

QC Samples
Field Duplicates: None

Overview: Sample Handling and Analyses
--Ten water samples collected on 9/21/09 – 9/23/09 were sent for analysis to Paragon Analytics (ALS Laboratory Group) in Fort Collins, Colorado.

-- Received cooler temperature range was approximately 0.6 – 4.4 degrees C (recommended temps are 4 +/- 2 degrees C). The lab noted that the samples were correctly preserved for analysis.

--Samples were analyzed within recommended holding times.

--Chain of Custodies were complete, and samples were analyzed for the indicated analysis, which included Total Recoverable and Dissolved Metals by EPA 200.7 and Total Recoverable and Dissolved Metals by EPA 200.8.

--One field duplicates was submitted with the samples but not analyzed in this report; it was analyzed in SDG 0909294.

--Requested detection limits were met for the analyses.

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blank: One method blank was run for EPA 200.7 and one method blank was run for EPA 200.8. Target compounds were not detected at or above the detection limit in the method blanks for the analyses, with the following exceptions:

Metals EPA200.7 Prep Batch IP0911002-1 QCBatchID IP0911002-1-1: Aluminum, Magnesium, and Zinc

Metals EPA 200.8 Prep Batch IP0911002-1 QCBatchID IP0911002-1-2: Cadmium and Uranium

Due to these detections, samples associated with these method blanks that had concentrations less than or equal to the reporting limit, but greater than or equal to the MDL, were given a "U" qualifier, and the values are raised to the Reporting Limit, as per USEPA CLP guidance.

--LCS Recoveries: One LCS sample was run for Metals by 200.7 and one LCS sample was run for Metals by 200.8. The LCS recoveries were all within control limits.

Precision

--Laboratory precision was based on the MS/MSD RPDs and Analytical Duplicate RPDs. Samples 300L-SW-01-E and 300L-SW-01-D were selected for Metals by 200.7 and 200.8. Matrix spike percent recoveries were within laboratory control limits for all MS/MSD analyses.

MS/MSD RPDs were within laboratory control limits (<20 RPD) for all MS/MSD analyses.

Analytical Duplicate RPDs were within laboratory control limits (<20 RPD) for all analyses.

Serial dilution was within control limits (<10% dilution).

--No field duplicates were evaluated in this report.

Completeness

Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation, with the exception of those listed below.

QUALIFIED DATA TABLE

Analyte	Field Sample Identification	Qualifier Assigned	Reason for Qualification
Aluminum (Dissolved)	CONF-SW-01-KC	U	Due to associated Method Blank detection/CLP Guidance
	CONF-SW-01-C		
	CONF-SW-01-K		
	300L-SW-01-A		
	300L-SW-01-B		
	300L-SW-01-C		
	300L-SW-01-D		
	700L-SW-01-A		
Magnesium (Dissolved)	CONF-SW-01-KC	U	Due to associated Method Blank detection/CLP Guidance
	CONF-SW-01-K		
	SPR-SW-01-A		
	300L-SW-01-A		
	300L-SW-01-B		
	300L-SW-01-C		
	300L-SW-01-D		
	700L-SW-01-A		
Cadmium (Dissolved)	CONF-SW-01-KC	U	Due to associated Method Blank detection/CLP Guidance
	CONF-SW-01-C		
	CONF-SW-01-K		
	SPR-SW-01-A		
	300L-SW-01-A		

	300L-SW-01-B		
	300L-SW-01-C		
	300L-SW-01-D		
	700L-SW-01-A		
Zinc (Dissolved)	CONF-SW-01-KC	U	Due to associated Method Blank detection/CLP Guidance
	CONF-SW-01-C		
	CONF-SW-01-K		
	SPR-SW-01-A		
	300L-SW-01-A		
	300L-SW-01-B		
	300L-SW-01-C		
	700L-SW-01-A		

MEMORANDUM

TO: **Keir Craigie, Inorganics Quality Assurance Manager**
Tetra Tech, Inc.- Bothell, WA

FROM: **Tymeri Schleicher**
Tetra Tech MM - Fort Collins, CO

DATE: **December 10, 2009**

SUBJECT: **Metals Data Validation – Ross Adams Site September 2009 Sampling**

ATTACHMENT: **ADEC Laboratory Data Review Checklist**

Project #: 181862
Lab Report #: 0909294

Water Sample IDs

300L-SW-01-D (Total only)	900L-SW-01-A	900L-SW-01-B
900L-SW-01-C	900L-SW-01-D	900L-SW-01-E
900L-SW-01-F	700L-SW-01-B	300L-SW-01-E (Dissolved only)

QC Samples
Field Duplicates: 900L-SW-02-A (Duplicate of Sample 900L-SW-01-A)

Overview: Sample Handling and Analyses
--Nine water samples collected on 9/23/09 – 9/24/09 plus one field QC sample were sent for analysis to Paragon Analytics (ALS Laboratory Group) in Fort Collins, Colorado.

-- Received cooler temperature range was approximately 1.2 – 4.8 degrees C (recommended temps are 4 +/- 2 degrees C). The lab noted that the samples were correctly preserved for analysis.

--Samples were analyzed within recommended holding times.

--Chain of Custodies were complete; the lab noted sample 900L-SW-02-A had 2 different sampling times on each sample bottle (1530 and 1535).

--Samples were analyzed for the indicated analysis, which included Total Recoverable and Dissolved Metals by EPA 200.7 and Total Recoverable and Dissolved Metals by EPA 200.8.

--One field duplicate was submitted with the samples and analyzed in this report.

--Requested detection limits were met for the analyses.

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blank: One method blank was run for EPA 200.7 and one method blank was run for EPA 200.8. Target compounds were not detected at or above the detection limit in the method blanks for the analyses, with the following exceptions:

Metals EPA200.7 Prep Batch IP0911002-4 QCBatchID IP0911002-4-1: Aluminum, Calcium, Magnesium, Manganese, Sodium, and Zinc

Metals EPA 200.8 Prep Batch IP0911002-4 QCBatchID IP0911002-4-2: Cadmium, Copper, Lead, Nickel, Silver, Uranium, and Beryllium

Due to these detections, samples associated with these method blanks that had concentrations less than or equal to the reporting limit, but greater than or equal to the MDL, were given a "U" qualifier, and the values are raised to the Reporting Limit, as per USEPA CLP guidance.

--LCS Recoveries: One LCS sample was run for Metals by 200.7 and one LCS sample was run for Metals by 200.8. The LCS recoveries were all within control limits.

Precision

--Laboratory precision was based on the MS/MSD RPDs and Analytical Duplicate RPDs. Sample 900L-SW-01-E was selected for Metals by 200.7 and 200.8. Matrix spike percent recoveries were within laboratory control limits for all MS/MSD analyses.

MS/MSD RPDs were within laboratory control limits (<20 RPD) for all MS/MSD analyses.

Analytical Duplicate RPDs were within laboratory control limits (<20 RPD) for all analyses.

Serial dilution was within control limits (<10% dilution) with the exception of calcium and sodium for Sample 900L-SW-01-E. According to CLP guidance, if the sample concentration is >50x the MDL and the %D>10, samples shall be qualified. The sample concentration of the serial dilution is >50x the MDL for both calcium and sodium, and therefore sample 900L-SW-01-E is qualified as estimated (J).

--The field duplicates were evaluated as follows: a control limit of two times the reporting limit was utilized to assess the absolute difference between the sample results when one or both sample results were less than five times the reporting limit (MDL), otherwise a relative percent difference (RPD) of 35 % was applied. Field precision was measured for the field duplicate of sample 900L-SW-02-A. Comparison of the field duplicate fell within limits for all analyses.

Completeness

Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation, with the exception of those listed below.

QUALIFIED DATA TABLE

Analyte	Field Sample Identification	Qualifier Assigned	Reason for Qualification
Aluminum (Dissolved)	900L-SW-01-A	U	Due to associated Method Blank detection/CLP Guidance
	900L-SW-02-A		
	900L-SW-01-B		
	900L-SW-01-D		
	900L-SW-01-C		
	900L-SW-01-E		
	900L-SW-01-F		
	700L-SW-01-B		
	300L-SW-01-E		
Beryllium (Dissolved)	900L-SW-01-E	U	Due to associated Method Blank detection/CLP Guidance
	900L-SW-01-F		
Magnesium	900L-SW-01-A	U	Due to associated Method Blank

(Dissolved)	900L-SW-02-A		detection/CLP Guidance
	900L-SW-01-B		
	900L-SW-01-D		
	900L-SW-01-C		
	900L-SW-01-E		
	900L-SW-01-F		
	700L-SW-01-B		
	300L-SW-01-E		
Manganese (Dissolved)	900L-SW-01-E	U	Due to associated Method Blank detection/CLP Guidance
Cadmium (Dissolved)	300L-SW-01-E	U	Due to associated Method Blank detection/CLP Guidance
	900L-SW-01-A		
	900L-SW-02-A		
	900L-SW-01-B		
	900L-SW-01-D		
	900L-SW-01-C		
	900L-SW-01-E		
	900L-SW-01-F		
	700L-SW-01-B		
Calcium (Dissolved)	900L-SW-01-E	J	Serial dilution above 10%
	900L-SW-01-A	U	Due to associated Method Blank detection/CLP Guidance
	900L-SW-02-A		
	900L-SW-01-B		
	900L-SW-01-D		
	900L-SW-01-C		
	900L-SW-01-E		
	700L-SW-01-B		
	300L-SW-01-E		
Copper (Dissolved)	900L-SW-01-E	U	Due to associated Method Blank detection/CLP Guidance
	700L-SW-01-B		
Lead (Dissolved)	900L-SW-01-E	U	Due to associated Method Blank detection/CLP Guidance
	900L-SW-01-F		
Nickel (Dissolved)	900L-SW-01-E	U	Due to associated Method Blank detection/CLP Guidance
Sodium (Dissolved)	900L-SW-01-E	J	Serial dilution above 10%
Silver (Dissolved)	900L-SW-01-E	U	Due to associated Method Blank detection/CLP Guidance
	900L-SW-01-F		
Zinc (Dissolved)	900L-SW-01-A	U	Due to associated Method Blank detection/CLP Guidance
	900L-SW-02-A		
	900L-SW-01-D		
	900L-SW-01-C		
	900L-SW-01-E		
	700L-SW-01-B		
	300L-SW-01-E		

Laboratory Data Review Checklist

Completed by:	Tymeri Schleicher
Title:	Environmental Scientist
Date:	December 10, 2009
CS Report Name:	Metals
Report Date:	November 4, 2009
Consultant Firm:	Tetra Tech
Laboratory Name:	Paragon Analytics (ALS Laboratory Group)
Laboratory Report Number:	0909293 & 0909294
ADEC File Number:	
ADEC RecKey Number:	

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☒ Yes ☐ No Comments:

   ALS Laboratory Group is ADEC CS approved for BTEX and total volatile chlorinated solvents for water and soil. ALS is also ADEC approved for gross alpha and gross beta analysis of drinking water, and NELAP approved for analysis of water and soil samples taken for SDWA, CWA, and/or RCRA monitoring.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   ☐ Yes ☐ No Comments:

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   ☒ Yes ☐ No Comments:

   b. Correct analyses requested?

☒ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

   ☒ Yes ☐ No Comments:

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

   ☒ Yes ☐ No Comments:

   The lab noted the samples were correctly preserved

   c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

   ☒ Yes ☐ No Comments:

   d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

   ☒ Yes ☐ No Comments:

   A discrepancy was noted in sampling time of Sample 900-L-SW-02-A

   e. Data quality or usability affected? Explain.

   Comments:

   No

4. Case Narrative

   a. Present and understandable?

   ☒ Yes ☐ No Comments:

   b. Discrepancies, errors or QC failures identified by the lab?

   ☒ Yes ☐ No Comments:

   c. Were all corrective actions documented?

   ☒ Yes ☐ No Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

None

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☉ Yes ☐ No Comments:

b. All applicable holding times met?

☉ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☐ Yes ☐ No Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☐ Yes ☐ No Comments:

Note, the reported MDLs were less than or equal to the requested MDLs

e. Data quality or usability affected?

Comments:

No

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☉ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☉ Yes ☐ No Comments:

Note, some method blanks were greater than the MDL but less than the PQL

iii. If above PQL, what samples are affected?

Comments:

See report for list of affected samples due to method blank MDL exceedance

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☒ Yes ☐ No Comments:

v. Data quality or usability affected? Explain.

Comments:

Data is usable, but affected samples have a "U" qualifier

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☐ Yes ☐ No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No Comments:

N/A

vii. Data quality or usability affected? (Use comment box to explain)

Comments:

No

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☐ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☐ No Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): <u>Water and Soil</u>

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☐ Yes ☐ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

iii. All results less than PQL?

☐ Yes ☐ No Comments:

iv. If above PQL, what samples are affected?

Comments:

v. Data quality or usability affected? Explain.

Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☑ Yes ☐ No Comments:

ii. Submitted blind to lab?

☑ Yes ☐ No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☑ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

N/A

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☒ No ☐ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? Explain.

Comments:

N/A

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☒ Yes ☐ No Comments:

MEMORANDUM

TO: **Jan Johnson, Radiological QAM**
Tetra Tech MM- Fort Collins, CO

FROM: **Tymeri Schleicher**
Tetra Tech MM - Fort Collins, CO

DATE: **December 14, 2009**

SUBJECT: **Radiochemical Data Validation – Ross Adams Site September 2009 Sampling**

ATTACHMENT: **ADEC Laboratory Data Review Checklists**

Project #: 181862
Lab Report #: 0909293

Water Sample IDs

CONF-SW-01-KC	CONF-SW-01-C	CONF-SW-01-K
SPR-SW-01-A	300L-SW-01-A	300L-SW-01-B
300L-SW-01-C	300L-SW-01-E	700L-SW-01-A

QC Samples
Field Blank: None

Overview: Sample Handling and Analyses
--Nine surface water samples collected on 9/21/09 – 9/23/09 were sent for analysis to Paragon Analytics (ALS Laboratory Group) in Fort Collins, Colorado.

--Received cooler temperature range was approximately 0.6 – 4.4 degrees C (recommended temps are 4 +/- 2 degrees C). The lab noted that the radiochemistry samples were received unpreserved, and were filtered and preserved prior to analysis.

--The samples were analyzed within recommended holding times.

--Chain of Custodies were complete, and samples were analyzed for the specific radionuclides by the indicated analysis method, which includes: lead-210 by Liquid Scintilation/704R9, radium-226 by EPA Method 903.1 (modified) and radium-228 by EPA Method 9320 (modified).

--One field duplicate was submitted with the samples, but was not analyzed in this report; it was analyzed in SDG 0909294.

--Requested detection limits were not met for all analyses; see notes below.

Lead-210

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC in the method blank for the lead-210 analysis.

--LCS Recoveries: One LCS sample was run for Pb-210; the recovery was within control limits.

Precision
--Laboratory precision was based on the analytical duplicate RERs. The laboratory referred to these as "Duplicate Error Ratios" (DERs). Sample SPR-SW-01-A was chosen as the analytical duplicate, and the DER was within control limits.

--No field duplicates were evaluated in this report.

Completeness
Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Radium-226

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC in the method blank for the radium-226 analysis. The requested MDC of 0.4 pCi/L was not met; the actual MDC was 0.49 pCi/L.

--LCS Recoveries: One LCS sample was run for Ra-226; the recovery was within control limits.

Precision
--Laboratory precision was based on the analytical duplicate RERs. The laboratory referred to these as "Duplicate Error Ratios" (DERs). Sample CONF-SW-01-KC was chosen as the duplicate, and the DER was within control limits.

--No field duplicates were evaluated in this report.

Completeness
Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Notes
The requested MDC of 0.4 pCi/g was not met for the Method Blank, the LCS sample, and samples CONF-SW-01-KC, CONF-SW-01-C, CONF-SW-01-K, 300L-SW-01-A, and 300L-SW-01-C. MDCs for these samples ranged from 0.46 – 0.62 pCi/L.

Radium-228

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC in the method blank for the radium-228 analysis.

--LCS Recoveries: Two LCS samples were run for Ra-228; the recoveries were within control limits.

Precision
--Laboratory precision was based on the analytical duplicate RERs and LCS/LCSD RERs. The laboratory referred to these as "Duplicate Error Ratios" (DERs). Sample CONF-SW-01-K was selected as the analytical duplicate. Both DERs were within control limits.

--No field duplicates were evaluated in this report.

Completeness
Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

MEMORANDUM

TO: **Jan Johnson, Radiological QAM**
Tetra Tech MM- Fort Collins, CO

FROM: **Tymeri Schleicher**
Tetra Tech MM - Fort Collins, CO

DATE: **December 14, 2009**

SUBJECT: **Radiochemical Data Validation – Ross Adams Site September 2009 Sampling**

ATTACHMENT: **ADEC Laboratory Data Review Checklists**

Project #: 181862
Lab Report #: 0909294

Water Sample IDs

300L-SW-01-D	900L-SW-01-A	900L-SW-01-B
900L-SW-01-C	900L-SW-01-D	900L-SW-01-E*
900L-SW-01-F*	700L-SW-01-B	

QC Samples
Field Blank: 900L-SW-02-A

Note: * indicates these samples were additionally analyzed for isotopic polonium, isotopic thorium, and isotopic uranium

Overview: Sample Handling and Analyses
--Eight surface water samples collected on 9/23/09 – 9/24/09 plus one field QC sample were sent for analysis to Paragon Analytics (ALS Laboratory Group) in Fort Collins, Colorado.

--Received cooler temperature range was approximately 1.2 – 4.8 degrees C (recommended temps are 4 +/- 2 degrees C). The lab noted that the radiochemistry samples were received unpreserved, and were filtered and preserved prior to analysis.

--The samples were analyzed within recommended holding times.

--Chain of Custodies were complete; the lab noted sample 900L-SW-02-A had 2 different sampling times on each sample bottle (1530 and 1535). Also, the lid for one of the 2 bottles for radionuclide analysis of sample 900L-SW-01-B was loose and leaking upon receipt, but no significant sample loss was noted.

-- Samples were analyzed for the specific radionuclides by the indicated analysis method, which includes: polonium-210 by Alpha Spectrocopy/714R11, isotopic thorium (Th-228, -230, and -232) by alpha spectroscopy/714R11, isotopic uranium (U-234, -235, and -238) by Alpha Spectroscopy/714R11, lead-210 by Liquid Scintilation/704R9, radium-226 by EPA Method 903.1 (modified), and radium-228 by EPA Method 9320 (modified).

--One field duplicate was submitted with the samples and analyzed in this report.

--Requested detection limits were not met for all analyses; see notes below.

Lead-210

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC in the method blank for the Pb-210 analysis.

--LCS Recoveries: One LCS sample was run for Pb-210; the recovery was within control limits.

Precision
--Laboratory precision was based on the analytical duplicate RERs. The laboratory referred to these as "Duplicate Error Ratios" (DERs). Sample 900L-SW-01-C was chosen as the analytical duplicate, and the DER was within control limits.

--The field duplicate was evaluated as follows: a control limit of two times the reporting limit was utilized to assess the absolute difference between the sample results when one or both sample results were less than five times the reporting limit (MDC), otherwise a relative percent difference (RPD) of 35 % was applied. Field precision was measured for the field duplicate of sample 900L-SW-02-A. Comparison of the field duplicate fell within limits for the analysis.

Completeness
Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Isotopic polonium

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC in the method blank for the polonium-210 analysis.

--LCS Recoveries: One LCS sample was run for Po-210; the recovery was within control limits.

Precision
--Laboratory precision was based on the analytical duplicate RERs. The laboratory referred to these as "Duplicate Error Ratios" (DERs). Sample 900L-SW-01-E was selected as the analytical duplicate; the DER was within control limits.

--No field duplicates were evaluated in this report.

Completeness
Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Isotopic thorium

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC for the isotopes Th-228, and Th-230. The concentration was above the MDC for Th-232, but below the requested MDC.

--LCS Recoveries: One LCS sample was run for Th-230; the recovery was within control limits.

Precision
--Laboratory precision was based on the analytical duplicate RERs. The laboratory referred to these as "Duplicate Error Ratios" (DERs). Sample 900L-SW-01-E was chosen as the analytical duplicate, and the DER was within control limits.

--No field duplicates were evaluated in this report.

Completeness
Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Isotopic uranium

Accuracy
The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC for the isotopic uranium (U-234, -235, and -238) analysis.

--LCS Recoveries: One LCS sample was run for U-234 and U-238; the recoveries were within control limits.

Precision
--Laboratory precision is based on the analytical duplicate RERs. The laboratory referred to these as "Duplicate Error Ratios" (DERs). Sample 900L-SW-01-E was chosen as the analytical duplicate, and the DER was within control limits.

--No field duplicates were evaluated in this report.

Completeness
Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Notes

Sample 900L-SW-01-E had chemical yields below control limits for U-234, -235, and -238, and was assigned a “Y2” qualifier by the lab. This sample is assigned a “J” qualifier in this data validation.

The requested MDC of 0.2 pCi/L was not met for Sample 900L-SW-01-E, for U-234 and U-238. The U-234 MDC was 0.33 pCi/L, and 0.36 pCi/L for U-238.

Radium-226

Accuracy

The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC in the method blank for the radium-226 analysis. The requested MDC of 0.4 pCi/L was not met; the actual MDC was 0.49 pCi/L.

--LCS Recoveries: One LCS sample was run for Ra-226; the recovery was within control limits.

Precision

--Laboratory precision was based on the analytical duplicate RERs. The laboratory referred to these as “Duplicate Error Ratios” (DERs). Sample 300L-SW-01-D was chosen as the duplicate, and the DER was within control limits.

--The field duplicate was evaluated as follows: a control limit of two times the reporting limit was utilized to assess the absolute difference between the sample results when one or both sample results were less than five times the reporting limit (MDC), otherwise a relative percent difference (RPD) of 35 % was applied. Field precision was measured for the field duplicate of sample 900L-SW-02-A. Comparison of the field duplicate fell within limits for the analysis.

Completeness

Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

Notes

The requested MDC of 0.4 pCi/g was not met for the Method Blank and samples 900L-SW-01-A, 900L-SW-01-B, 900L-SW-01-C, 900L-SW-01-D, 900L-SW-01-E, 900L-SW-01-F. MDCs ranged from 0.41 – 0.61 pCi/L.

Radium-228

Accuracy

The accuracy of the data was evaluated based on the method blank results and extraction efficiency (lab control sample (LCS) recovery) results.

--Method blanks: The method blank was less than the sample specific MDC in the method blank for the radium-228 analysis.

--LCS Recoveries: The initial LCS sample had a recovery below control limits, at 59.6%. Due to insufficient volume, samples 900L-SW-01-E and 900L-SW-01-F were not re-prepared, and are thus assigned an “S-“ qualifier due to the potential of low bias. The remaining samples were re-prepared in a separate batch, and the LCS recovery was within control limits.

Precision

--Laboratory precision was based on the analytical duplicate RERs and LCS/LCSD RERs. The laboratory referred to these as "Duplicate Error Ratios" (DERs). The LCSD was selected as the analytical duplicate. The DER was within control limits.

--The field duplicate was evaluated as follows: a control limit of two times the reporting limit was utilized to assess the absolute difference between the sample results when one or both sample results were less than five times the reporting limit (MDC), otherwise a relative percent difference (RPD) of 35 % was applied. Field precision was measured for the field duplicate of sample 900L-SW-02-A. Comparison of the field duplicate fell within limits for the analysis.

Completeness

Analytical results were reported for all samples submitted. The results were determined to be usable as reported with areas of concern with respect to data quality noted above. No samples were qualified as a result of the validation.

QUALIFIED DATA TABLE

Nuclide	Field Sample Identification	Qualifier Assigned	Reason for Qualification
U-234	900L-SW-01-E	J	Chemical Yield outside default limits.
U-235	900L-SW-01-E	J	Chemical Yield outside default limits.
U-238	900L-SW-01-E	J	Chemical Yield outside default limits.
Ra-228	900L-SW-01-E	S-	LCS recovery below control limits
	900L-SW-01-F		

Laboratory Data Review Checklist

Completed by:	Tymeri Schleicher
Title:	Environmental Scientist
Date:	December 14, 2009
CS Report Name:	Radiochemistry
Report Date:	November 2-25, 2009
Consultant Firm:	Tetra Tech
Laboratory Name:	Paragon Analytics (ALS Laboratory Group)
Laboratory Report Number:	0909293 & 0909294
ADEC File Number:	
ADEC RecKey Number:	

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☑ Yes ☐ No Comments:

   ALS Laboratory Group is ADEC CS approved for BTEX and total volatile chlorinated solvents for water and soil. ALS is also ADEC approved for gross alpha and gross beta analysis of drinking water, and NELAP approved for analysis of water and soil samples taken for SDWA, CWA, and/or RCRA monitoring.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   ☐ Yes ☐ No Comments:

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   ☑ Yes ☐ No Comments:

   b. Correct analyses requested?

☒ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☒ Yes ☐ No Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No Comments:

Samples were filtered and preserved by the lab prior to analysis.

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No Comments:

A lid for one of the 2 bottles of Sample 900L-SW-01-B was loose and leaking upon receipt, but no significant sample loss was noted.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☒ Yes ☐ No Comments:

A discrepancy in the sampling time of Sample 900L-SW-02-A was noted.

e. Data quality or usability affected? Explain.

Comments:

No.

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☒ Yes ☐ No Comments:

c. Were all corrective actions documented?

☒ Yes ☐ No Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

None.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☉ Yes ☐ No Comments:

b. All applicable holding times met?

☉ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☐ Yes ☐ No Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☐ Yes ☉ No Comments:

Note, the reported MDCs were less than or equal to the requested MDCs, with the exception of certain samples for Ra-226 analysis in 0909293, and U-234, U-238, and Ra-226 analysis in 0909294. See report for list of samples.

e. Data quality or usability affected?

Comments:

No.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☉ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☐ Yes ☉ No Comments:

The method blank for isotopic thorium (Th-232 only) in 0909294 was above the MDC, but below the requested MDC, and the method blank for Ra-226 in 0909293 was above the requested MDC.

iii. If above PQL, what samples are affected?

Comments:

All associated samples in the corresponding SDG.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No Comments:

No samples were qualified as the method blank exceedance was minor.

v. Data quality or usability affected? Explain.

Comments:

No.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☐ Yes ☐ No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☐ Yes ☒ No Comments:

The LCS recovery for Ra-228 in 0909294 was below project limits.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Samples 900L-SW-01-E and 900L-SW-01-F.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Affected samples are assigned an “S-” qualifier.

☑ Yes ☐ No Comments:

Data quality or usability affected? (Use comment box to explain)
Comments:

No; samples are qualified.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

☐ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☐ No Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): <u>Water and Soil</u>

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☐ Yes ☐ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

iii. All results less than PQL?

☐ Yes ☐ No Comments:

If above PQL, what samples are affected?

Comments:

iv. Data quality or usability affected? Explain.

Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☑ Yes ☐ No Comments:

ii. Submitted blind to lab?

☑ Yes ☐ No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☑ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No, field duplicate met project controls.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☒ No ☐ Not Applicable

i. All results less than PQL?

☐ Yes ☒ No Comments:

N/A

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? Explain.

Comments:

No.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☒ Yes ☐ No Comments:

APPENDIX D-4
SEPTEMBER SAMPLING EVENT
LABORATORY REPORTS

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Inorganics

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909293

1. This report consists of 9 water samples.

2. The samples were received cool and intact by ALS on 09/28/09.

3. The anion aliquots were filtered prior to analysis per standard method protocol.

4. The samples were prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures and Environmental Monitoring Systems Laboratory (EMSL) Rev 2.1 procedures.

5. The samples were analyzed following MCAWW and EMSL procedures for the following methods:

Analyte	Method	SOP #
Alkalinity	310.1	1106 Rev 7
Bicarbonate	310.1	1106 Rev 8
Carbonate	310.1	1106 Rev 8
pH	150.1	1126 Rev 17
Specific conductance	120.1	1128 Rev 9
TDS	160.1	1101 Rev 10
TSS	160.2	1100 Rev 10
Chloride	300.0 Revision 2.1	1113 Rev 11
Sulfate	300.0 Revision 2.1	1113 Rev 11

6. All standards and solutions were used within their recommended shelf life.

7. The samples were prepared and analyzed within the established hold time for each analysis except pH, TDS, and TSS. The samples were received with very little or no holding time remaining.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

   - A preparation (method) blank and laboratory control sample (LCS) were prepared and analyzed with the samples in each applicable preparation batch. There were not more than 20 samples in each preparation batch. A laboratory control sample duplicate was prepared and analyzed for the TSS batch.
   - The method blank associated with each applicable batch was below the reporting limit for the requested analytes. This indicates that no contaminants were introduced to the samples during preparation and analysis.
   - The LCS and LCSD was within the acceptance limits for each applicable analysis.
   - All initial and continuing calibration blanks (ICB/CCB) associated with each applicable analytical batch were below the reporting limit for the requested analytes.
   - All initial and continuing calibration verifications (ICV/CCV) associated with each applicable analytical batch were within the acceptance criteria for the requested analytes. This indicates a valid calibration and stable instrument conditions.

9. Matrix specific quality control procedures.

   Sample 0909293-1 was designated as the quality control sample for the pH, specific conductance, and TDS analyses. Due to limited sample volume, matrix QC could not be performed for the TSS batch. A laboratory control sample duplicate has been included instead. Per method requirements, matrix QC was performed for the remaining analyses. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

   Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

   - A sample duplicate was prepared and analyzed with the pH, specific conductance, and TDS batches. All guidance criteria for precision were met.

     For pH, the difference between the pH of the sample and its duplicate must be less than or equal to 0.2 pH units to be in control. RPD is not calculated for this analysis

10. Sample dilutions were not required for the requested analyses.

11. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in SOP 939 Revision 3.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Megan Johnson
Inorganics Primary Data Reviewer

10/21/09
Date

Inorganics Final Data Reviewer

10/21/09
Date

Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- If the analyte was analyzed for but not detected a “U” is entered.
- QC qualifier -- Specified entries and their meanings are as follows:

  N - Spiked sample recovery not within control limits.

  * - Duplicate analysis (relative percent difference) not within control limits.

  Z - Calibration spike recovery not within control limits.

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909293
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
CONF-SW-01-KC	0909293-1		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-2		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-3		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-4		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-5		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-6		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-7		WATER	22-Sep-09	15:57
300L-SW-01-E	0909293-8		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-9		WATER	23-Sep-09	10:13
CONF-SW-01-KC	0909293-10		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-11		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-12		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-13		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-14		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-15		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-16		WATER	22-Sep-09	15:57
300L-SW-01-D	0909293-17		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-18		WATER	23-Sep-09	10:13

ALS Laboratory Group

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Date 9/24/09 Page 1 of 8

Lab ID 0909293

Project Name/No.	Ross-Adams
REPORT TO:	Aaron Orechwa
PHONE:	970-420-9395
FAX:	970 223 7171
E-MAIL:	aaron.orechwa@tetratech.com
COMPANY:	Tetra Tech MMI
ADDRESS:	3401 Automation Way Suite 100 Ft Collins, CO 80525

Sampler(s) WB & LM

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem	TDC
CONF-SW-01-KC	9/21	1338	1	W	HZ SO4	1																														X
CONF-SW-01-KC	9/21	1338		W	HN O3	2											X	X	X	X	(10)															X
CONF-SW-01-KC	9/21	1338		W	—	4																X	X			X									X	
CONF-SW-01-C	9/21	1550	2	W	HZ SO4	1																														X
CONF-SW-01-C	9/21	1550		W	HN O3	2											X	X	X	X	(11)															X
CONF-SW-01-C	9/21	1550		W	—	4																X	X			X									X	
CONF-SW-01-K	9/21	1626	3	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Dissolved metals filtered in field

Relinquished By: (1) Signature	Walt Bowles
Printed Name	Walt Bowles
Date	9/26/09 Time 0733
Company	Tetra Tech EC
Relinquished By: (2) Signature	Alaska Air
Printed Name	
Date	Time
Company	
Received By: (1) Signature	Alaska Air
Printed Name	
Date	Time
Company	
Received By: (2) Signature	
Printed Name	Amy Wolf
Date	9/28/09 Time 1750
Company	ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

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Chain-of-Custody

Date 9/24/09 Page 2 of 8

Lab ID 0909293

Project Name/No.

REPORT TO: REFER TO PAGE 1

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Sampler(s) LM, WS

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
CONF-SW-01-K	9/21	1626	3	W	HNO3	2											X	X	X	X	(12)															
CONF-SW-01-K	9/21	1626	↓	W	—	4																X	X			X									X	
SPR-SW-01-A	9/22	1258	4	W	HZ SO4	1																														X
SPR-SW-01-A	9/22	1258	|	W	HNO3	2											X	X	X	X	(13)															
SPR-SW-01-A	9/22	1258	↓	W	—	4																X	X			X									X	
300L-SW-01-A	9/22	1336	5	W	HNO3	2											X	X	X	X	(14)															
300L-SW-01-A	9/22	1336	↓	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: REFER TO PAGE 1

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

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Chain-of-Custody

Date 9/24/09 Page 3 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	Refer to page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS&TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-A	9/22	1522	(5)	W	~~HZ~~	4																X	X			X									X	
300L-SW-01-B	9/22	1511	(6)	W	H2SO4	1																														X
300L-SW-01-B	9/22	1511	|	W	HNO3	2											X	X	X	X	(15)															
300L-SW-01-B	9/22	1511	↓	W	–	4																X	X			X									X	
300L-SW-01-C	9/22	1557	(7)	W	H2SO4	1																														X
300L-SW-01-C	9/22	1557	|	W	HNO3	2											X	X	X	X	(16)															
300L-SW-01-C	9/22	1557	↓	W	–	4																X	X			X									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to page 1

Circle Analytical Method Above

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

SW8015B GRO DRO Other | SW8260C | SW8260C | SW8270D | SW8081A | SW8082 | SW8151A | SW8330 SW8330B SW8321 by LC/MS/MS | SW8260C SW8270D SW8081A SW8151A | SW6010B SW7470A | SW6010B 7470A/7471A E200.7 E245.1 | SW6010B 7470A/7471A E200.7 E245.1 | SW6020A E200.8 | SW6020A E200.8 | SW7196A Alkaline Digestion? Y / N | SW9056 E300.0 | TDS: E160.1 TSS: E160.2 Total: E160.3 | SW9040B SW9045C E150.1 | SW6850 by LC/MS/MS E314.0

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature C Wolf
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

∞

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909293

Project Name/No.:

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

REPORT TO: Refer to Page 1
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions (Cl, SO4)	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647	(8)	W	HZ SO4	1																														X
300L-SW-01-D	9/22	1647	↓	W	HNO3	2											X	X	X	X	(17)															
300L-SW-01-D	9/22	1647	↓	W	—	4																X	X			X									X	
700L-SW-01-A	9/23	1013	(9)	W	HZ SO4	1																														X
700L-SW-01-A	9/23	1013	↓	W	HNO3	2											X	X	X	X	(18)															
700L-SW-01-A	9/23	1013	↓	W	—	4																X	X			X									X	
300L-SW-01-E	9/23	1111	(8)	W	HZ SO4	1	(8) ON WORKORDER 0909294																													X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature _____
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

6

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra-Tech Workorder No: 0909293

Project Manager: AW Initials: CJO Date: 9/29/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3. Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5. Are the **COC and bottle labels complete and legible**?		(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7 Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) ★
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10. Is there **sufficient sample** for the requested analyses?		(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12. Are all samples within **holding times** for the requested analyses?		YES	(NO) •
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17. Were the samples **shipped on ice**?		(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.4	4.2	0.8	0.6	0.8			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	18	18	13	14	14			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ The 1gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

• Samples # 1-3 were received out of hold for TDS/TSS.
↓ #4-8 ↓ ↓ on last day of hold for TDS/TSS
Samples # 9 is ok.

If applicable, was the client contacted? (YES) NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

027 KTN 7318 4160 0909293 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Tijqqfst!BddpvoutOvncfs
27442321321
Dvtupnfst!E!Ovncfs
22651

Not Negotiable
Air Waybill
Jtvfe!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpotjhoffjt!BddpvoutOvncfs

Bmp!opyg:
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsnbujpo
22651
Uftub!Uf di !FD!Jbd
2: 914!O!Dsf fl !Qbsl x bz
Cpvfmm X B!: 9122
VTB

SRN/1048447
HpmeTusfbl

Bhfou!JBUB!Dpef
BddpvoutOp/

BjsqpsuJpgEfqbsuvsf!)Bees/!pgGjstuDbssjfs!boe!Sfrvftufe!Spvjoh
Ketchikan

Up Czl!GjstuDbssjfs	Up!0Cz	Up!0Cz	Dvssfodz	X U0VBM	Pvfs	Efdmbsfe!Wbmvf !Gps!Dbssjbhf	Efdmbsfe!Wbmvf !Gps!Dvtupnt
SEA Alaska Airlines	DEN	AS	USD	PX X	X	NVD	NCV

BjsqpsuJpgEftujobujpo	Gjhiu uEbuf	Gjhiu uEbuf	Bnpvoupg.bt vsbodf
Denver	AS 062/27	AS 678/27	XXX

Iboemjoh!Jogpsnbujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Opjpg Qjfdft	Hspt t Xfjhiu	h no		Dpnn pejuz Jfn !Op/	Di bshf bcrh Xfjhiu	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)JodmfEjn fotjpot !ps!Wpmvn f *
10	654.0	L	Q		654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 23 x 14 x16 x 1 25 x 19 x15 x 1 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0						961.38	GSX PER Volume: 30.280

Prepaid	Xfjhiu Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

UpubmPvtjeDi bshft!Evf !Bhfou

UpubmPvtjeDi bshft!Evf !Dbssjfs
65.40

UpubmQsfqbje
1,060.66

UpubmDpmmfdu

Pvtjef!Di bshft
MYC 52.32
SCC 13.08

Tijqqfsdfsajgjfstuibuuf!qbsujdvmbst!polu f!gpdfiifsfpgbsf!dpsse dvboe!ubinsofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.

For: Tetra Tech EC Inc

Tihobuvsf !pgJ tvjoh!Dbssjfs spsju !Bhfou

WS Ui JT!TI JQNFOU!EPFT!OPU!DPOUBJO EBOHFSPVT!HPPET

Ui JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

38!Tfq!311: 21;54 Ketchikan Alaska Airlines

Fyfdvufe!Po!)Ebuf * bu)Qmbdf * Tjhobuvsf !pgJ tvjoh!Dbssjfs spsju !Bhfou

027-7318 4160

0909293

Alaska Air Cargo™
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

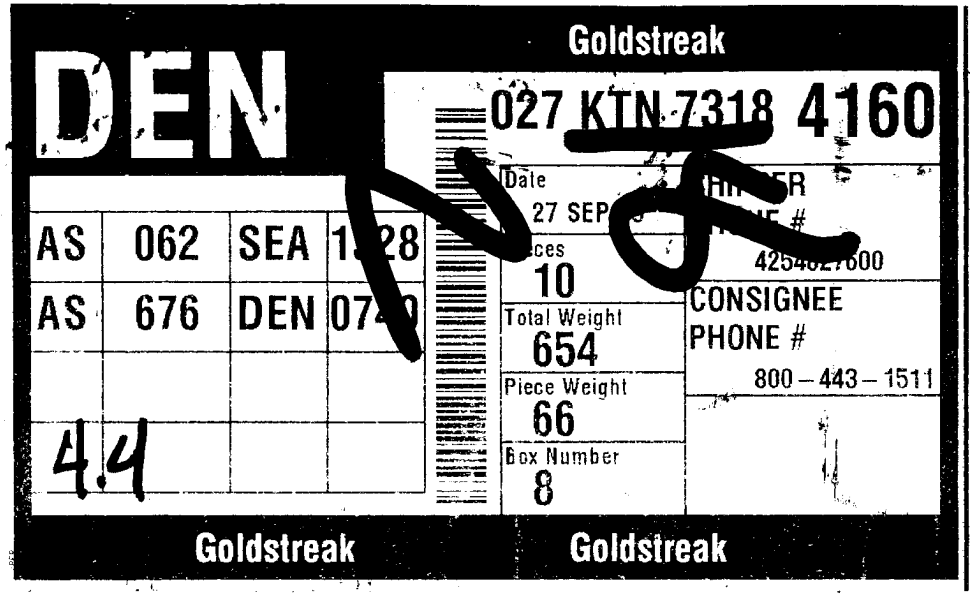
PO Number

RECEIPT STATEMENT

The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

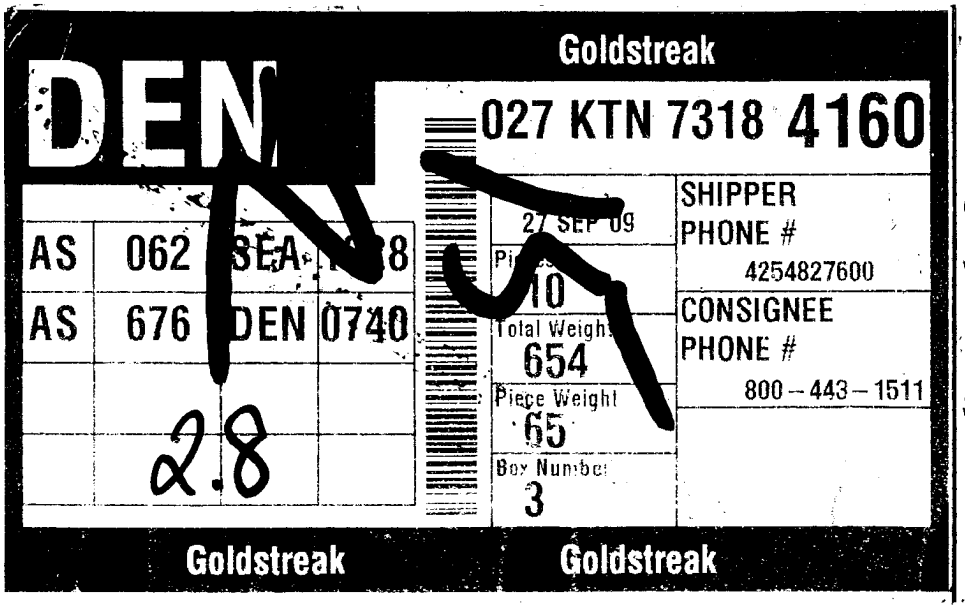
Date: 28-Sep-2009
Time: 17:50
Driver: Paragon

Registration:
Signature:

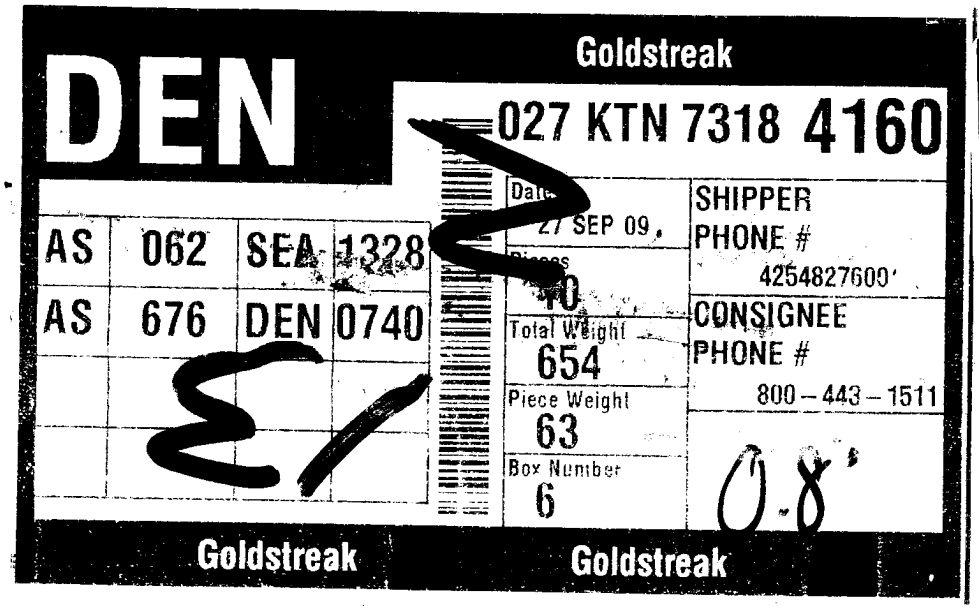

DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
65
Box Number
10
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 0740
4.2
Date
27 SEP 09
Pieces
10
Piece Weight
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.8
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.6
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
1.2
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
800-443-1511
2.2
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
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Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

BICARBONATE AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
CONF-SW-01-C	0909293-2	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
CONF-SW-01-K	0909293-3	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
SPR-SW-01-A	0909293-4	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-A	0909293-5	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-B	0909293-6	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-C	0909293-7	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-E	0909293-8	09/22/2009	10/01/2009	10/01/2009	N/A	1	7.1	5		100 ml
700L-SW-01-A	0909293-9	09/23/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909293-1*

CARBONATE AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
CONF-SW-01-C	0909293-2	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
CONF-SW-01-K	0909293-3	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
SPR-SW-01-A	0909293-4	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-A	0909293-5	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-B	0909293-6	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-C	0909293-7	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-E	0909293-8	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
700L-SW-01-A	0909293-9	09/23/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909293-1*

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
CONF-SW-01-C	0909293-2	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
CONF-SW-01-K	0909293-3	09/21/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
SPR-SW-01-A	0909293-4	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-A	0909293-5	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-B	0909293-6	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-C	0909293-7	09/22/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml
300L-SW-01-E	0909293-8	09/22/2009	10/01/2009	10/01/2009	N/A	1	7.1	5		100 ml
700L-SW-01-A	0909293-9	09/23/2009	10/01/2009	10/01/2009	N/A	1	5	5	U	100 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909293-1*

pH in water @25 Degrees Celsius

Method EPA150.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 20 ml
Matrix: WATER
Result Units: pH

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	10/01/2009	10/02/2009	N/A	1	6.84	0.1		20 ml
CONF-SW-01-C	0909293-2	09/21/2009	10/01/2009	10/02/2009	N/A	1	6.59	0.1		20 ml
CONF-SW-01-K	0909293-3	09/21/2009	10/01/2009	10/02/2009	N/A	1	6.78	0.1		20 ml
SPR-SW-01-A	0909293-4	09/22/2009	10/01/2009	10/02/2009	N/A	1	5.33	0.1		20 ml
300L-SW-01-A	0909293-5	09/22/2009	10/01/2009	10/02/2009	N/A	1	6.38	0.1		20 ml
300L-SW-01-B	0909293-6	09/22/2009	10/01/2009	10/02/2009	N/A	1	6.61	0.1		20 ml
300L-SW-01-C	0909293-7	09/22/2009	10/01/2009	10/02/2009	N/A	1	6.35	0.1		20 ml
300L-SW-01-E	0909293-8	09/22/2009	10/01/2009	10/02/2009	N/A	1	7.35	0.1		20 ml
700L-SW-01-A	0909293-9	09/23/2009	10/01/2009	10/02/2009	N/A	1	6.85	0.1		20 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ph0909293-1*

SPECIFIC CONDUCTIVITY

Method EPA120.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 45 ml
Matrix: WATER
Result Units: umhos/cm

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	10/01/2009	10/01/2009	N/A	1	2.94	1		45 ml
CONF-SW-01-C	0909293-2	09/21/2009	10/01/2009	10/01/2009	N/A	1	2.98	1		45 ml
CONF-SW-01-K	0909293-3	09/21/2009	10/01/2009	10/01/2009	N/A	1	2.48	1		45 ml
SPR-SW-01-A	0909293-4	09/22/2009	10/01/2009	10/01/2009	N/A	1	2.55	1		45 ml
300L-SW-01-A	0909293-5	09/22/2009	10/01/2009	10/01/2009	N/A	1	1.15	1		45 ml
300L-SW-01-B	0909293-6	09/22/2009	10/01/2009	10/01/2009	N/A	1	1.67	1		45 ml
300L-SW-01-C	0909293-7	09/22/2009	10/01/2009	10/01/2009	N/A	1	0.534	1		45 ml
300L-SW-01-E	0909293-8	09/22/2009	10/01/2009	10/01/2009	N/A	1	7.26	1		45 ml
700L-SW-01-A	0909293-9	09/23/2009	10/01/2009	10/01/2009	N/A	1	2.5	1		45 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *sc0909293-1*

TOTAL DISSOLVED SOLIDS

Method EPA160.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: METHOD
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
CONF-SW-01-C	0909293-2	09/21/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
CONF-SW-01-K	0909293-3	09/21/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
SPR-SW-01-A	0909293-4	09/22/2009	09/30/2009	10/01/2009	N/A	1	22	20		100 ml
300L-SW-01-A	0909293-5	09/22/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
300L-SW-01-B	0909293-6	09/22/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
300L-SW-01-C	0909293-7	09/22/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
300L-SW-01-E	0909293-8	09/22/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
700L-SW-01-A	0909293-9	09/23/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *td0909293-1*

TOTAL SUSPENDED SOLIDS

Method EPA160.2

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: METHOD
Final Volume: 500 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
CONF-SW-01-C	0909293-2	09/21/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
CONF-SW-01-K	0909293-3	09/21/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
SPR-SW-01-A	0909293-4	09/22/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
300L-SW-01-A	0909293-5	09/22/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
300L-SW-01-B	0909293-6	09/22/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
300L-SW-01-C	0909293-7	09/22/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
300L-SW-01-E	0909293-8	09/22/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
700L-SW-01-A	0909293-9	09/23/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ts0909293-1*

CHLORIDE

Method EPA300.0 Revision 2.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 5 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	09/30/2009	10/01/2009	N/A	1	2.9	0.2		5 ml
CONF-SW-01-C	0909293-2	09/21/2009	09/30/2009	10/01/2009	N/A	1	2.7	0.2		5 ml
CONF-SW-01-K	0909293-3	09/21/2009	09/30/2009	10/01/2009	N/A	1	2.4	0.2		5 ml
SPR-SW-01-A	0909293-4	09/22/2009	09/30/2009	10/01/2009	N/A	1	3.1	0.2		5 ml
300L-SW-01-A	0909293-5	09/22/2009	09/30/2009	10/01/2009	N/A	1	1.7	0.2		5 ml
300L-SW-01-B	0909293-6	09/22/2009	09/30/2009	10/01/2009	N/A	1	1.7	0.2		5 ml
300L-SW-01-C	0909293-7	09/22/2009	09/30/2009	10/01/2009	N/A	1	1.6	0.2		5 ml
300L-SW-01-E	0909293-8	09/22/2009	09/30/2009	10/01/2009	N/A	1	1.8	0.2		5 ml
700L-SW-01-A	0909293-9	09/23/2009	09/30/2009	10/01/2009	N/A	1	2	0.2		5 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ic0909293-1*

SULFATE

Method EPA300.0 Revision 2.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 5 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	09/30/2009	10/01/2009	N/A	1	1.3	1		5 ml
CONF-SW-01-C	0909293-2	09/21/2009	09/30/2009	10/01/2009	N/A	1	1.1	1		5 ml
CONF-SW-01-K	0909293-3	09/21/2009	09/30/2009	10/01/2009	N/A	1	1.3	1		5 ml
SPR-SW-01-A	0909293-4	09/22/2009	09/30/2009	10/01/2009	N/A	1	1	1	U	5 ml
300L-SW-01-A	0909293-5	09/22/2009	09/30/2009	10/01/2009	N/A	1	1	1		5 ml
300L-SW-01-B	0909293-6	09/22/2009	09/30/2009	10/01/2009	N/A	1	1.3	1		5 ml
300L-SW-01-C	0909293-7	09/22/2009	09/30/2009	10/01/2009	N/A	1	1	1		5 ml
300L-SW-01-E	0909293-8	09/22/2009	09/30/2009	10/01/2009	N/A	1	2.7	1		5 ml
700L-SW-01-A	0909293-9	09/23/2009	09/30/2009	10/01/2009	N/A	1	1.6	1		5 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ic0909293-1*

BICARBONATE AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AK091001-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK091001-1
QCBatchID: AK091001-1-1
Run ID: ak091001-1a
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091001-1MB	10/1/2009	10/01/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909293-1*

CARBONATE AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AK091001-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK091001-1
QCBatchID: AK091001-1-1
Run ID: ak091001-1a
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091001-1MB	10/1/2009	10/01/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909293-1*

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AK091001-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK091001-1
QCBatchID: AK091001-1-1
Run ID: ak091001-1a
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091001-1MB	10/1/2009	10/01/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909293-1*

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AK091001-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/01/2009
Date Analyzed: 10/01/2009

Prep Batch: AK091001-1
QCBatchID: AK091001-1-1
Run ID: ak091001-1a
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
	TOTAL ALKALINITY AS CaCO3	100	100	5		100	85 - 115

Data Package ID: *ak0909293-1*

pH

Method EPA150.1

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/21/2009
Date Extracted: 10/01/2009
Date Analyzed: 10/02/2009

Prep Batch: PH091002-1
QCBatchID: PH091002-1-1
Run ID: ph091002-1a
Cleanup: NONE
Basis: As Received
File Name:

Sample Aliquot: 20 ml
Final Volume: 20 ml
Result Units: pH
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-29-7	PH	6.84		6.65		0.1	1		0.2

Data Package ID: *ph0909293-1*

Specific Conductance in Water

Method EPA120.1

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/21/2009
Date Extracted: 10/01/2009
Date Analyzed: 10/01/2009

Prep Batch: SC091001-1
QCBatchID: SC091001-1-1
Run ID: sc091001-1a
Cleanup: NONE
Basis: As Received
File Name:

Sample Aliquot: 45 ml
Final Volume: 45 ml
Result Units: umhos/cm
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-34-4	SPECIFIC CONDUCTIVITY	2.94		2.96		1	1	1	10

Data Package ID: *sc0909293-1*

Total Dissolved Solids

Method EPA160.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: TD090930-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Sep-09
Date Analyzed: 01-Oct-09
Prep Method: METHOD

Prep Batch: TD090930-2
QCBatchID: TD090930-2-1
Run ID: td091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-33-3	TOTAL DISSOLVED SOLIDS	1	20	20	U	

Data Package ID: *td0909293-1*

Total Dissolved Solids

Method EPA160.1

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: TD090930-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009
Prep Method: METHOD

Prep Batch: TD090930-2
QCBatchID: TD090930-2-1
Run ID: td091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-33-3	TOTAL DISSOLVED SOLIDS	400	397	20		99	85 - 115%

Data Package ID: *td0909293-1*

Total Dissolved Solids

Method EPA160.1

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/21/2009
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009

Prep Batch: TD090930-2
QCBatchID: TD090930-2-1
Run ID: td091001-1a
Cleanup: NONE
Basis: As Received
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-33-3	TOTAL DISSOLVED SOLI	20	U	20	U	20	1		15

Data Package ID: *td0909293-1*

Total Suspended Solids

Method EPA160.2

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: TS090930-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Sep-09
Date Analyzed: 01-Oct-09
Prep Method: METHOD

Prep Batch: TS090930-2
QCBatchID: TS090930-2-1
Run ID: ts091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 500 ml
Final Volume: 500 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-32-2	TOTAL SUSPENDED SOLIDS	1	4	4	U	

Data Package ID: *ts0909293-1*

Total Suspended Solids

Method EPA160.2

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: TS090930-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009
Prep Method: METHOD

Prep Batch: TS090930-2
QCBatchID: TS090930-2-1
Run ID: ts091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 500 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-32-2	TOTAL SUSPENDED SOLIDS	590	572	20		97	85 - 115%

Lab ID: TS090930-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009
Prep Method: METHOD

Prep Batch: TS090930-2
QCBatchID: TS090930-2-1
Run ID: ts091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 500 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
10-32-2	TOTAL SUSPENDED SOLIDS	546	527	20		97	15	8

Data Package ID: *ts0909293-1*

Ion Chromatography

Method EPA300.0 Revision 2.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: IC090930-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Sep-09
Date Analyzed: 01-Oct-09
Prep Method: NONE

Prep Batch: IC090930-3
QCBatchID: IC090930-3-1
Run ID: ic090930-1a
Cleanup: NONE
Basis: N/A
File Name: 90930_071.DXD

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
16887-00-6	CHLORIDE	1	0.2	0.2	U	
14808-79-8	SULFATE	1	1	1	U	

Data Package ID: *ic0909293-1*

Ion Chromatography

Method EPA300.0 Revision 2.1

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: IC090930-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009
Prep Method: NONE

Prep Batch: IC090930-3
QCBatchID: IC090930-3-1
Run ID: ic090930-1a
Cleanup: NONE
Basis: N/A
File Name: 90930_072.DXD

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
16887-00-6	CHLORIDE	5	4.85	0.2		97	90 - 110%
14808-79-8	SULFATE	25	24.1	1		97	90 - 110%

Data Package ID: *ic0909293-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Inorganics

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of 9 water samples.

2. The samples were received cool and intact by ALS on 09/28/09.

3. The anion aliquots were filtered prior to analysis per standard method protocol.

4. The samples were prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures and Environmental Monitoring Systems Laboratory (EMSL) Rev 2.1 procedures.

5. The samples were analyzed following MCAWW and EMSL procedures for the following methods:

Analyte	Method	SOP #
Alkalinity	310.1	1106 Rev 7
Bicarbonate	310.1	1106 Rev 8
Carbonate	310.1	1106 Rev 8
pH	150.1	1126 Rev 17
Specific conductance	120.1	1128 Rev 9
TDS	160.1	1101 Rev 10
TSS	160.2	1100 Rev 10
Chloride	300.0 Revision 2.1	1113 Rev 11
Sulfate	300.0 Revision 2.1	1113 Rev 11

6. All standards and solutions were used within their recommended shelf life.

7. The samples were prepared and analyzed within the established hold time for each analysis except pH, TDS, and TSS. The samples were received with very little holding time remaining.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

   - A preparation (method) blank and laboratory control sample (LCS) were prepared and analyzed with the samples in each applicable preparation batch. There were not more than 20 samples in each preparation batch. A laboratory control sample duplicate was prepared and analyzed for the TSS batch.
   - The method blank associated with each applicable batch was below the reporting limit for the requested analytes. This indicates that no contaminants were introduced to the samples during preparation and analysis.
   - The LCS and LCSD were within the acceptance limits for each applicable analysis.
   - All initial and continuing calibration blanks (ICB/CCB) associated with each applicable analytical batch were below the reporting limit for the requested analytes.
   - All initial and continuing calibration verifications (ICV/CCV) associated with each applicable analytical batch were within the acceptance criteria for the requested analytes. This indicates a valid calibration and stable instrument conditions.

9. Matrix specific quality control procedures.

   Sample 0909294-1 was designated as the quality control sample for the pH and specific conductance analyses. Sample 0909294-9 was designated as the quality control sample for the chloride and sulfate analysis. Due to limited sample volume, matrix QC could not be performed for the TSS batch. A laboratory control sample duplicate has been included instead. Per method requirements, matrix QC was performed for the remaining analyses. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

   Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

   - A matrix spike (MS) was prepared and analyzed with the chloride and sulfate batch. All guidance criteria for precision and accuracy were met.
   - A sample duplicate was prepared and analyzed with the pH and specific conductance batches. All guidance criteria for precision were met.

     For pH, the difference between the pH of the sample and its duplicate must be less than or equal to 0.2 pH units to be in control. RPD is not calculated for this analysis.

10. Sample dilutions were not required for the requested analyses.

11. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in SOP 939 Revision 3.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Megan Johnson
Inorganics Primary Data Reviewer

10/21/09
Date

Inorganics Final Data Reviewer

10/21/09
Date

Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- If the analyte was analyzed for but not detected a “U” is entered.
- QC qualifier -- Specified entries and their meanings are as follows:

  N - Spiked sample recovery not within control limits.

  * - Duplicate analysis (relative percent difference) not within control limits.

  Z - Calibration spike recovery not within control limits.

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01-D	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-D	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-C	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

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TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.:

Sampler(s): LM, WB

Turnaround: Standard or Due ____

Disposal: By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																														X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X									X	
700L-SW-01-A	9/23	1013		W	HNO3	1																														X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X									X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																														X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date ____ Time ____
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date ____ Time ____
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/23/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.:
REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
300L-SW-01-E	9/23	1111	(1)	W	HNO3	2											X	X	X	X	(10)					X											
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X		
900L-SW-01-A	9/23	1530	(2)	W	HZSO4	1																													X	
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	(11)															
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X		
900L-SW-02-A	9/23	1530	(3)	W	HZSO4	1																													X	
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	(12)															

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Air
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature Amy Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/25/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

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Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.

REPORT TO: Refer to Page 1

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8330B SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions (CL+SO4) SW9056 E300.0	Solids: TDS+TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	ALKALINITY SM2320B	Actinides Circle: Am / Cm / Pu / Th / U E901.1	Gamma Isotopes SW9310 E900.0	Gross Alpha / Beta SW9315 E903.0	Total Alpha-Emitting Radium E903.1	Radium 226 SW9320 E904.0	Radium 228 D5811	Strontium 90 (Total RadioSr) E906.0	Tritium SM7500Rn	Radon 222	RADIOCHEM	TDS
900L-SW-02-A	9/23	1530	3	W	–	4																X	X			X								X	
900L-SW-01-B	9/23	1605	4	W	HZ SO4	1																													X
900L-SW-01-B	9/23	1605	↓	W	HN O3	2											X	X	X	X	(13)														
900L-SW-01-B	9/23	1605	↓	W	–	4																X	X			X								X	
900L-SW-01-C	9/23	1635	5	W	HZ SO4	1																													X
900L-SW-01-C	9/23	1635	↓	W	HN O3	2											X	X	X	X	(14)														
900L-SW-01-C	9/23	1635	↓	W	–	4																X	X			X								X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)
Signature [signature]
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature [signature]
Printed Name Amy Wolf
Date 9/26/09 Time 1750
Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

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Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,F,SO4	Solids TDS + TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem TOC
900L-SW-01-D	9/24	0948	(6)	W	HZ SO4	1																													X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	(15)															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X								X	
900L-SW-01-E	9/24	1015	(7)	W	HZ SO4	1																													X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	(16)															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X								X	
900L-SW-01-F	9/24	1040	(8)	W	HZ SO4	1																													X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature C Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS+TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem	TDS
900L-SW-01-F	9/24	1040	(8)	W	HNO3	2											X	X	X	X	(17)															
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X									X	
700L-SW-01-B	9/24	1115	(9)	W	HZSO4	1																														X
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(15)															
700L-SW-01-B	9/24	1115	↓	W	-	4																X	X			X									X	

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

10

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature CWolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

11

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opujgz
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpui f mtX B!: 9122
VTB
SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

Bddpvou Op/

BjsqpsuJpgEf qbsuvsf !)Bees'!pgGjstuDbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up Cz!GjstuDbssjf s	Up!0Cz	Up!0Cz	Dvssf odz	X UOWBM	Pui f s	Ef dmbsf e!Wbmvf !GpsDbssjbhf	Ef dmbsf e!Wbmvf !GpsDvt upn t
SEA Alaska Airlines	DEN	AS	USD PX	X	X	NVD	NCV

BjsqpsuJpgEf t ujobujpo	Gjhi uEbuf	Gjhi uEbuf	Bn pvoupg.bt vsbodf
Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf df t	Hspt t X f jhi u	h mo	Dpn n pejuz Jtf n !Op/	Di bshf bcmf X f jhi u	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)bdnfEjn f ot jpot !ps!Vpmvn f *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 GSX PER 23 x 14 x16 x 1 25 x 19 x15 x 1 Volume: 30.280 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	

Prepaid	X f jhi u Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Pui f s Di bshf t

MYC 52.32
SCC 13.08

UpubmPui f s Di bshf t !Evf !Bhf ou

UpubmPui f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bUui f !qbsujdvmbst !po!u f !gbdf !i f sf pgbsf !dpssf duboe!u bUinsofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB Ui JT!TI JQNFOU!EPFT!OPUDPOUBJO EBOHFSPVT!HPPET

Ui JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
1,060.66

UpubmDpnnfodu

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qmbdf * Tjhobuvsf !pg.Jt vjoh!Dbssjf s sfsjuu !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

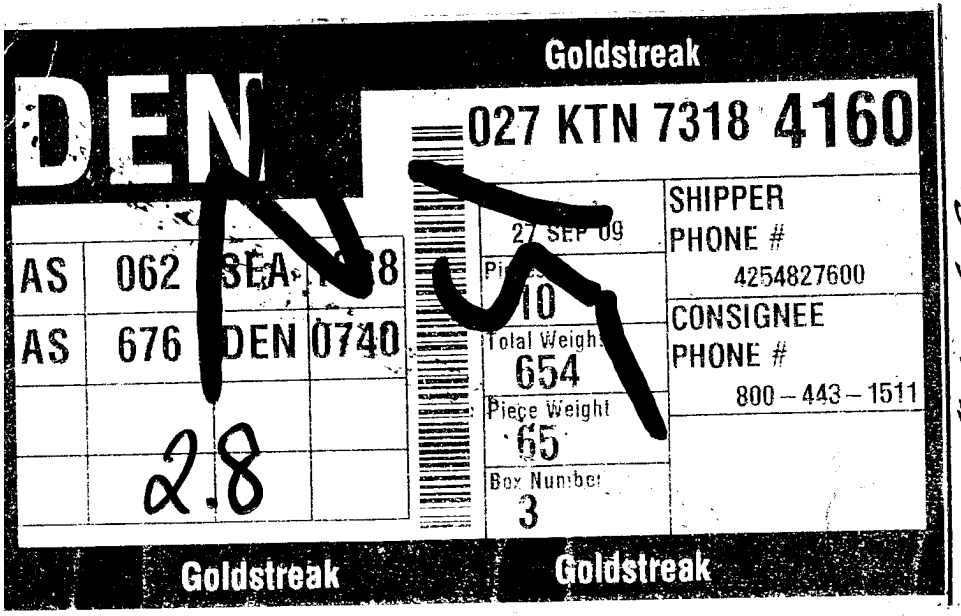
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

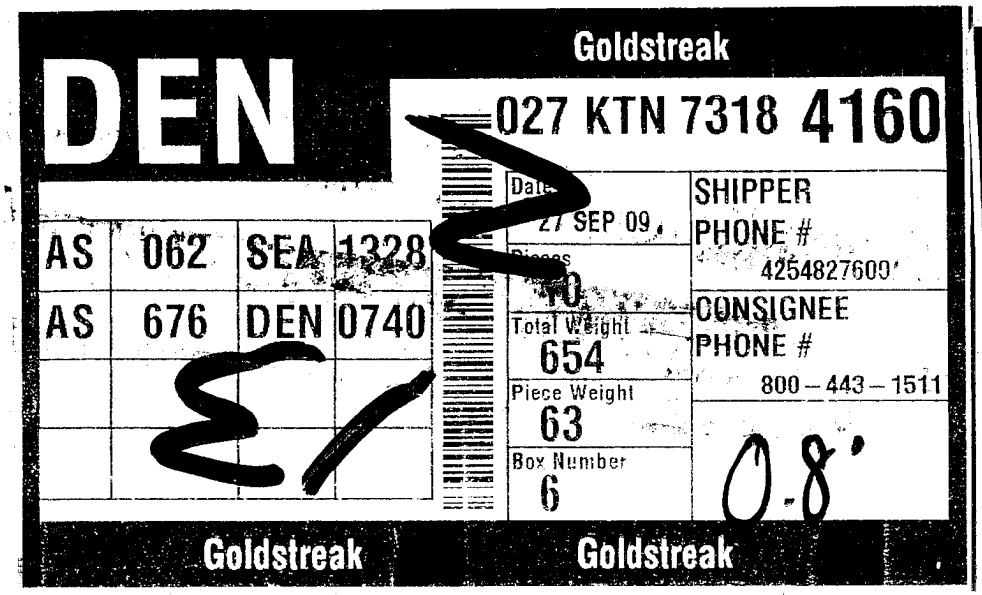

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
Weight
Piece Weight
65
Box Number
10
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
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0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak

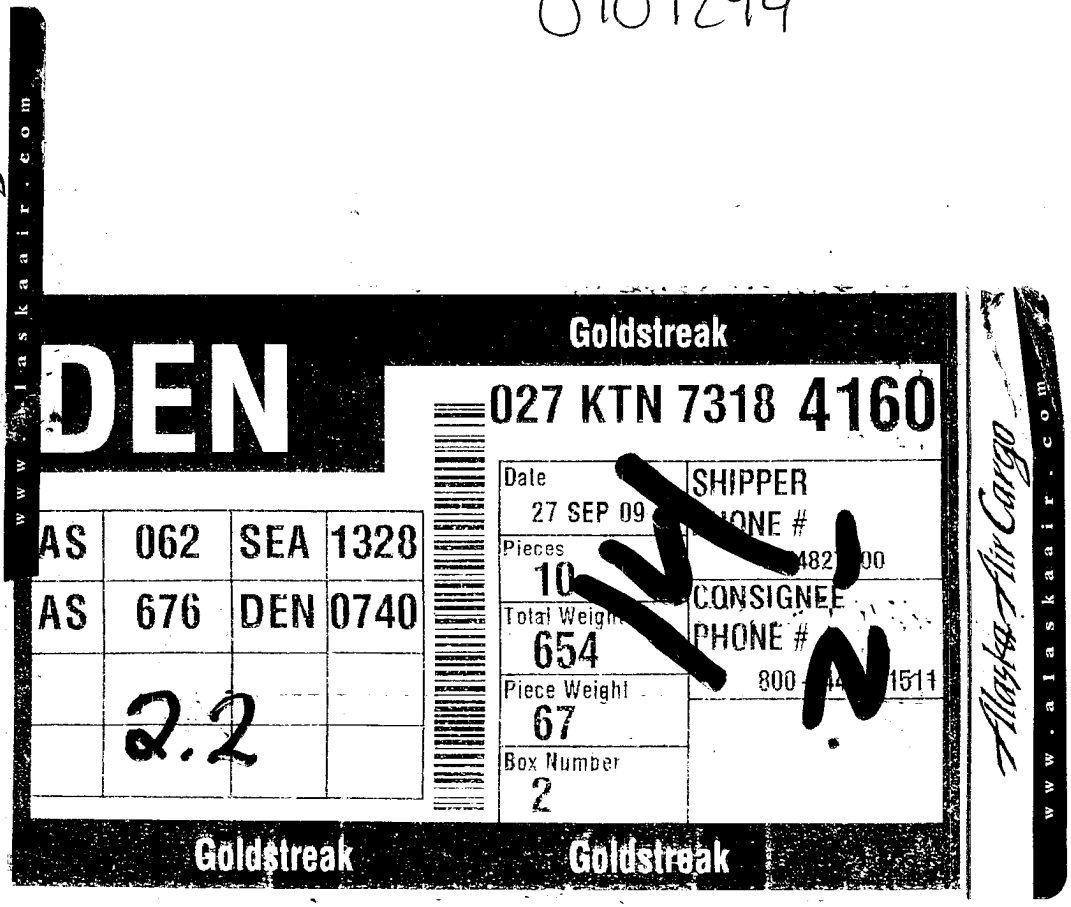

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.2
Date
27 SEP 09
Pieces
10
Piece Weight
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
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Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.8
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.6
Goldstreak Goldstreak
Alaska Air Cargo
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0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
Box Number 1
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
1.2
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
CONSIGNEE PHONE #
800-443-1511
2.2
Goldstreak Goldstreak
Alaska Air Cargo
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DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
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09092 94


DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
1.4
Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
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BICARBONATE AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-A	0909294-2	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-02-A	0909294-3	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-B	0909294-4	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-C	0909294-5	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-D	0909294-6	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-E	0909294-7	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-F	0909294-8	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
700L-SW-01-B	0909294-9	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909294-1*

CARBONATE AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-A	0909294-2	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-02-A	0909294-3	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-B	0909294-4	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-C	0909294-5	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-D	0909294-6	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-E	0909294-7	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-F	0909294-8	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
700L-SW-01-B	0909294-9	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909294-1*

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-A	0909294-2	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-02-A	0909294-3	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-B	0909294-4	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-C	0909294-5	09/23/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-D	0909294-6	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-E	0909294-7	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
900L-SW-01-F	0909294-8	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml
700L-SW-01-B	0909294-9	09/24/2009	10/02/2009	10/02/2009	N/A	1	5	5	U	100 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909294-1*

pH in water @25 Degrees Celsius

Method EPA150.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 20 ml
Matrix: WATER
Result Units: pH

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	10/01/2009	10/02/2009	N/A	1	6.48	0.1		20 ml
900L-SW-01-A	0909294-2	09/23/2009	10/01/2009	10/02/2009	N/A	1	6.11	0.1		20 ml
900L-SW-02-A	0909294-3	09/23/2009	10/01/2009	10/02/2009	N/A	1	6.07	0.1		20 ml
900L-SW-01-B	0909294-4	09/23/2009	10/01/2009	10/02/2009	N/A	1	6.06	0.1		20 ml
900L-SW-01-C	0909294-5	09/23/2009	10/01/2009	10/02/2009	N/A	1	6.07	0.1		20 ml
900L-SW-01-D	0909294-6	09/24/2009	10/01/2009	10/02/2009	N/A	1	5.9	0.1		20 ml
900L-SW-01-E	0909294-7	09/24/2009	10/01/2009	10/02/2009	N/A	1	6.22	0.1		20 ml
900L-SW-01-F	0909294-8	09/24/2009	10/01/2009	10/02/2009	N/A	1	6.65	0.1		20 ml
700L-SW-01-B	0909294-9	09/24/2009	10/01/2009	10/02/2009	N/A	1	6.31	0.1		20 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ph0909294-1*

SPECIFIC CONDUCTIVITY

Method EPA120.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 45 ml
Matrix: WATER
Result Units: umhos/cm

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	10/01/2009	10/01/2009	N/A	1	3.73	1		45 ml
900L-SW-01-A	0909294-2	09/23/2009	10/01/2009	10/01/2009	N/A	1	5.15	1		45 ml
900L-SW-02-A	0909294-3	09/23/2009	10/01/2009	10/01/2009	N/A	1	4.32	1		45 ml
900L-SW-01-B	0909294-4	09/23/2009	10/01/2009	10/01/2009	N/A	1	5.31	1		45 ml
900L-SW-01-C	0909294-5	09/23/2009	10/01/2009	10/01/2009	N/A	1	5.94	1		45 ml
900L-SW-01-D	0909294-6	09/24/2009	10/01/2009	10/01/2009	N/A	1	4.69	1		45 ml
900L-SW-01-E	0909294-7	09/24/2009	10/01/2009	10/01/2009	N/A	1	8.24	1		45 ml
900L-SW-01-F	0909294-8	09/24/2009	10/01/2009	10/01/2009	N/A	1	9.2	1		45 ml
700L-SW-01-B	0909294-9	09/24/2009	10/01/2009	10/01/2009	N/A	1	5.09	1		45 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *sc0909294-1*

TOTAL DISSOLVED SOLIDS

Method EPA160.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: METHOD
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
900L-SW-01-A	0909294-2	09/23/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
900L-SW-02-A	0909294-3	09/23/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
900L-SW-01-B	0909294-4	09/23/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
900L-SW-01-C	0909294-5	09/23/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
900L-SW-01-D	0909294-6	09/24/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
900L-SW-01-E	0909294-7	09/24/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
900L-SW-01-F	0909294-8	09/24/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml
700L-SW-01-B	0909294-9	09/24/2009	09/30/2009	10/01/2009	N/A	1	20	20	U	100 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *td0909294-1*

TOTAL SUSPENDED SOLIDS

Method EPA160.2

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: METHOD
Final Volume: 500 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
900L-SW-01-A	0909294-2	09/23/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
900L-SW-02-A	0909294-3	09/23/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
900L-SW-01-B	0909294-4	09/23/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
900L-SW-01-C	0909294-5	09/23/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
900L-SW-01-D	0909294-6	09/24/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
900L-SW-01-E	0909294-7	09/24/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
900L-SW-01-F	0909294-8	09/24/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml
700L-SW-01-B	0909294-9	09/24/2009	09/30/2009	10/01/2009	N/A	1	4	4	U	500 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ts0909294-1*

CHLORIDE

Method EPA300.0 Revision 2.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 5 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	09/30/2009	10/01/2009	N/A	1	1.9	0.2		5 ml
900L-SW-01-A	0909294-2	09/23/2009	09/30/2009	10/01/2009	N/A	1	1.8	0.2		5 ml
900L-SW-02-A	0909294-3	09/23/2009	09/30/2009	10/01/2009	N/A	1	1.8	0.2		5 ml
900L-SW-01-B	0909294-4	09/23/2009	09/30/2009	10/01/2009	N/A	1	1.7	0.2		5 ml
900L-SW-01-C	0909294-5	09/23/2009	09/30/2009	10/01/2009	N/A	1	2	0.2		5 ml
900L-SW-01-D	0909294-6	09/24/2009	09/30/2009	10/01/2009	N/A	1	3	0.2		5 ml
900L-SW-01-E	0909294-7	09/24/2009	09/30/2009	10/01/2009	N/A	1	2.2	0.2		5 ml
900L-SW-01-F	0909294-8	09/24/2009	09/30/2009	10/01/2009	N/A	1	2.4	0.2		5 ml
700L-SW-01-B	0909294-9	09/24/2009	09/30/2009	10/01/2009	N/A	1	2.5	0.2		5 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ic0909294-1*

SULFATE

Method EPA300.0 Revision 2.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 5 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01-D	0909294-1	09/23/2009	09/30/2009	10/01/2009	N/A	1	1	1	U	5 ml
900L-SW-01-A	0909294-2	09/23/2009	09/30/2009	10/01/2009	N/A	1	1	1	U	5 ml
900L-SW-02-A	0909294-3	09/23/2009	09/30/2009	10/01/2009	N/A	1	1	1	U	5 ml
900L-SW-01-B	0909294-4	09/23/2009	09/30/2009	10/01/2009	N/A	1	1	1		5 ml
900L-SW-01-C	0909294-5	09/23/2009	09/30/2009	10/01/2009	N/A	1	1	1	U	5 ml
900L-SW-01-D	0909294-6	09/24/2009	09/30/2009	10/01/2009	N/A	1	1	1	U	5 ml
900L-SW-01-E	0909294-7	09/24/2009	09/30/2009	10/01/2009	N/A	1	1.3	1		5 ml
900L-SW-01-F	0909294-8	09/24/2009	09/30/2009	10/01/2009	N/A	1	1.9	1		5 ml
700L-SW-01-B	0909294-9	09/24/2009	09/30/2009	10/01/2009	N/A	1	1.1	1		5 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ic0909294-1*

BICARBONATE AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AK091002-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK091002-1
QCBatchID: AK091002-1-1
Run ID: ak091002-1a
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091002-1MB	10/2/2009	10/02/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909294-1*

CARBONATE AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AK091002-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK091002-1
QCBatchID: AK091002-1-1
Run ID: ak091002-1a
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091002-1MB	10/2/2009	10/02/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909294-1*

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AK091002-1MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: AK091002-1
QCBatchID: AK091002-1-1
Run ID: ak091002-1a
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK091002-1MB	10/2/2009	10/02/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0909294-1*

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AK091002-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/02/2009
Date Analyzed: 10/02/2009

Prep Batch: AK091002-1
QCBatchID: AK091002-1-1
Run ID: ak091002-1a
Cleanup: NONE
Basis: N/A

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
	TOTAL ALKALINITY AS CaCO3	100	100	5		100	85 - 115

Data Package ID: *ak0909294-1*

pH

Method EPA150.1

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909294-1D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/23/2009
Date Extracted: 10/01/2009
Date Analyzed: 10/02/2009

Prep Batch: PH091002-1
QCBatchID: PH091002-1-1
Run ID: ph091002-1a
Cleanup: NONE
Basis: As Received
File Name:

Sample Aliquot: 20 ml
Final Volume: 20 ml
Result Units: pH
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-29-7	PH	6.48		6.32		0.1	1		0.2

Data Package ID: *ph0909294-1*

Specific Conductance in Water

Method EPA120.1

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909294-1D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/23/2009
Date Extracted: 10/01/2009
Date Analyzed: 10/01/2009

Prep Batch: SC091001-1
QCBatchID: SC091001-1-1
Run ID: sc091001-1a
Cleanup: NONE
Basis: As Received
File Name:

Sample Aliquot: 45 ml
Final Volume: 45 ml
Result Units: umhos/cm
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-34-4	SPECIFIC CONDUCTIVITY	3.73		3.97		1	1	6	10

Data Package ID: *sc0909294-1*

Total Dissolved Solids

Method EPA160.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: TD090930-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Sep-09
Date Analyzed: 01-Oct-09
Prep Method: METHOD

Prep Batch: TD090930-2
QCBatchID: TD090930-2-1
Run ID: td091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-33-3	TOTAL DISSOLVED SOLIDS	1	20	20	U	

Data Package ID: *td0909294-1*

Total Dissolved Solids

Method EPA160.1

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: TD090930-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009
Prep Method: METHOD

Prep Batch: TD090930-2
QCBatchID: TD090930-2-1
Run ID: td091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 100 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-33-3	TOTAL DISSOLVED SOLIDS	400	397	20		99	85 - 115%

Data Package ID: *td0909294-1*

Total Suspended Solids

Method EPA160.2

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: TS090930-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Sep-09
Date Analyzed: 01-Oct-09
Prep Method: METHOD

Prep Batch: TS090930-2
QCBatchID: TS090930-2-1
Run ID: ts091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 500 ml
Final Volume: 500 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-32-2	TOTAL SUSPENDED SOLIDS	1	4	4	U	

Data Package ID: *ts0909294-1*

Total Suspended Solids

Method EPA160.2

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: TS090930-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009
Prep Method: METHOD

Prep Batch: TS090930-2
QCBatchID: TS090930-2-1
Run ID: ts091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 500 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-32-2	TOTAL SUSPENDED SOLIDS	590	572	20		97	85 - 115%

Lab ID: TS090930-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009
Prep Method: METHOD

Prep Batch: TS090930-2
QCBatchID: TS090930-2-1
Run ID: ts091001-1a
Cleanup: NONE
Basis: N/A
File Name: Manual Entry

Sample Aliquot: 100 ml
Final Volume: 500 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
10-32-2	TOTAL SUSPENDED SOLIDS	546	527	20		97	15	8

Data Package ID: *ts0909294-1*

Ion Chromatography

Method EPA300.0 Revision 2.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: IC090930-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 30-Sep-09
Date Analyzed: 01-Oct-09
Prep Method: NONE

Prep Batch: IC090930-3
QCBatchID: IC090930-3-1
Run ID: ic090930-1a
Cleanup: NONE
Basis: N/A
File Name: 90930_071.DXD

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
16887-00-6	CHLORIDE	1	0.2	0.2	U	
14808-79-8	SULFATE	1	1	1	U	

Data Package ID: *ic0909294-1*

Ion Chromatography

Method EPA300.0 Revision 2.1

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: IC090930-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09/30/2009
Date Analyzed: 10/01/2009
Prep Method: NONE

Prep Batch: IC090930-3
QCBatchID: IC090930-3-1
Run ID: ic090930-1a
Cleanup: NONE
Basis: N/A
File Name: 90930_072.DXD

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
16887-00-6	CHLORIDE	5	4.85	0.2		97	90 - 110%
14808-79-8	SULFATE	25	24.1	1		97	90 - 110%

Data Package ID: *ic0909294-1*

Ion Chromatography

Method EPA300.0 Revision 2.1

Matrix Spike

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-B
LabID: 0909294-9MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 30-Sep-09
Date Analyzed: 02-Oct-09

Prep Batch: IC090930-3
QCBatchID: IC090930-3-1
Run ID: ic090930-1a
Cleanup: NONE
Basis: As Received

Sample Aliquot: 5 ml
Final Volume: 5 ml
Result Units: MG/L
File Name: 90930_164.DXD

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
16887-00-6	CHLORIDE	2.5		7.34		0.2	5	97	85 - 115%
14808-79-8	SULFATE	1.1		20		1	20	95	85 - 115%

Data Package ID: *ic0909294-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Total Organic Carbon

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909293

1. This report consists of 9 water samples.

2. The samples were received cool and intact by ALS on 09/28/09.

3. The samples had been correctly preserved for the requested analysis.

4. The samples were prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures.

5. The samples were analyzed following MCAWW procedures for the following method:

Analyte	Method	SOP #
TOC (Total Organic Carbon)	415.1	670 Rev 13

6. All standards and solutions were used within their recommended shelf life.

7. The samples were prepared and analyzed within the established hold time for TOC analysis.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

- A preparation (method) blank, laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) were prepared and analyzed with the samples in this preparation batch. There were not more than 20 samples in this preparation batch.
- The method blank associated with this batch was below the reporting limit for the requested analyte. This indicates that no contaminants were introduced to the samples during preparation and analysis.
- The LCS and LCSD were within the acceptance limits for TOC analysis.

- All continuing calibration verifications (CCV) associated with this batch were within the acceptance criteria for the requested analyte. This indicates a valid calibration and stable instrument conditions.

9. Matrix specific quality control procedures.

   Since a sample from this Order Number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

SLJ — 10-19-09

Sharon L. Jobes
Organics Primary Data Reviewer — Date

Steven D. White — 10-19-09

Organics Final Data Reviewer — Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909293
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
CONF-SW-01-KC	0909293-1		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-2		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-3		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-4		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-5		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-6		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-7		WATER	22-Sep-09	15:57
300L-SW-01-E	0909293-8		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-9		WATER	23-Sep-09	10:13
CONF-SW-01-KC	0909293-10		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-11		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-12		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-13		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-14		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-15		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-16		WATER	22-Sep-09	15:57
300L-SW-01-D	0909293-17		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-18		WATER	23-Sep-09	10:13

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

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Date 9/24/09 Page 1 of 8

Lab ID 0909293

Project Name/No.	Ross-Adams
REPORT TO:	Aaron Orechwa
PHONE:	970-420-9395
FAX:	970 223 7171
E-MAIL:	aaron.orechwa@tetratech.com
COMPANY:	Tetra Tech MMI
ADDRESS:	3401 Automation Way Suite 100 Ft Collins, CO 80525

Sampler(s) WB & LM

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
CONF-SW-01-KC	9/21	1338	1	W	HZ SO4	1																														X
CONF-SW-01-KC	9/21	1338		W	HN O3	2											X	X	X	X	(10)															X
CONF-SW-01-KC	9/21	1338		W	—	4																X	X			X									X	
CONF-SW-01-C	9/21	1550	2	W	HZ SO4	1																														X
CONF-SW-01-C	9/21	1550		W	HN O3	2											X	X	X	X	(11)															X
CONF-SW-01-C	9/21	1550		W	—	4																X	X			X									X	
CONF-SW-01-K	9/21	1626	3	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Dissolved metals filtered in field

Relinquished By: (1)	Relinquished By: (2)
Signature [signature]	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company
Received By: (1)	**Received By:** (2)
Signature Alaska Air	Signature [signature]
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

4

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
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Chain-of-Custody

Date 9/24/09 Page 2 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WS

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

REFER TO PAGE 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8330B SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions Cl, SO4 SW9056 E300.0	Solids TDS & TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	ALKALINITY SW6850 by LC/MS/MS E314.0
CONF-SW-01-K	9/21	1626	(3)	W	HNO3	2											X	X	X	X	(12)					
CONF-SW-01-K	9/21	1626	↓	W	—	4																X	X			X
SPR-SW-01-A	9/22	1258	(4)	W	HZ SO4	1																				X
SPR-SW-01-A	9/22	1258	|	W	HZ GS	2											X	X	X	X	(13)					
SPR-SW-01-A	9/22	1258	↓	W	—	4																X	X			X
300L-SW-01-A	9/22	1336	(5)	W	HNO3	2											X	X	X	X	(14)					
300L-SW-01-A	9/22	1336	↓	W	HZ SO4	1																				X

Circle Analytical Method Above

Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDS
Circle: Am / Cm / Pu / Th / U	E901.1	SW9310 E900.0	SW9315 E903.0	E903.1	SW9320 E904.0	D5811	E906.0	SM7500Rn		
									X	
										X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: REFER TO PAGE 1

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Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 3 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	Refer to page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS&TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-A	9/22	1522	5	W	~~HZ~~	4																X	X			X									X	
300L-SW-01-B	9/22	1511	6	W	H2SO4	1																														X
300L-SW-01-B	9/22	1511	|	W	HNO3	2											X	X	X	X	(15)															
300L-SW-01-B	9/22	1511	↓	W	–	4																X	X			X									X	
300L-SW-01-C	9/22	1557	7	W	H2SO4	1																														X
300L-SW-01-C	9/22	1557	|	W	HNO3	2											X	X	X	X	(16)															
300L-SW-01-C	9/22	1557	↓	W	–	4																X	X			X									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

SW8015B GRO DRO Other | SW8260C | SW8260C | SW8270D | SW8081A | SW8082 | SW8151A | SW8330 SW8330B SW8321 by LC/MS/MS | SW8260C SW8270D SW8081A SW8151A | SW6010B SW7470A | SW6010B 7470A/7471A E200.7 E245.1 | SW6010B 7470A/7471A E200.7 E245.1 | SW6020A E200.8 | SW6020A E200.8 | SW7196A Alkaline Digestion? Y / N | SW9056 E300.0 | TDS: E160.1 TSS: E160.2 Total: E160.3 | SW9040B SW9045C E150.1 | SW6850 by LC/MS/MS E314.0

Relinquished By: (1)
Signature: [signature]
Printed Name: Walt Bowles
Date: 9/26/09 Time: 0733
Company: Tetra Tech EC

Relinquished By: (2)
Signature: Alaska Air
Printed Name: _____
Date: _____ Time: _____
Company: _____

Received By: (1)
Signature: Alaska Air
Printed Name: _____
Date: _____ Time: _____
Company: _____

Received By: (2)
Signature: C Wolf
Printed Name: Amy Wolf
Date: 9/28/09 Time: 1750
Company: ALS-FC

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ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909293

Project Name/No.:

REPORT TO: Refer to Page 1

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8330B SW8321 by LC/MS/MS	TCLP Organics SW8260C SW8270D SW8081A SW8151A SW1311	TCLP Metals SW6010B SW7470A SW1311	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions (Cl,F,SO4) SW9056 E300.0	Solids TDS & TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	ALKALINITY	Actinides Circle: Am / Cm / Pu / Th / U E901.1	Gamma Isotopes SW9310 E900.0	Gross Alpha / Beta SW9315 E903.0	Total Alpha-Emitting Radium E903.1	Radium 226 SW9320 E904.0	Radium 228 D5811	Strontium 90 (Total RadioSr) E906.0	Tritium SM7500Rn	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647	(8)	W	HZ SO4	1															(17)													X
300L-SW-01-D	9/22	1647	↓	W	HN ON	2											X	X	X	X	(17)													
300L-SW-01-D	9/22	1647	↓	W	—	4																X	X			X							X	
700L-SW-01-A	9/23	1013	(9)	W	HZ SO4	1															(18)													X
700L-SW-01-A	9/23	1013	↓	W	HN ON	2											X	X	X	X	(18)													
700L-SW-01-A	9/23	1013	↓	W	—	4																X	X			X							X	
300L-SW-01-E	9/23	1111	(8)	W	HZ SO4	1	(8) ON WORK ORDER 0909294																											X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature: Walt Bowles	Signature: Alaska Air
Printed Name: Walt Bowles	Printed Name:
Date: 9/26/09 Time: 0733	Date: Time:
Company: Tetra Tech EC	Company:

Received By: (1)	Received By: (2)
Signature: Alaska Air	Signature:
Printed Name:	Printed Name: Amy Wolf
Date: Time:	Date: 9/28/09 Time: 1750
Company:	Company: ALS-FC

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra-Tech Workorder No: 0909293

Project Manager: AW Initials: CJO Date: 9/29/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3. Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5. Are the **COC and bottle labels complete and legible**?		(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7 Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) ★
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10. Is there **sufficient sample** for the requested analyses?		(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12. Are all samples within **holding times** for the requested analyses?		YES	(NO) •
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17. Were the samples **shipped on ice**?		(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.4	4.2	0.8	0.6	0.8			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	18	18	13	14	14			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ The 1gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

• Samples # 1-3 were received out of hold for TDS/TSS.
↓ #4-8 ↓ ↓ on last day of hold for TDS/TSS
Samples # 9 is ok.

If applicable, was the client contacted? (YES) NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

027 KTN 7318 4160 0909293 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321
Dvtupn f st !E!Ovn cf s
22651

Not Negotiable
Air Waybill
Jtvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpotjhof f (t !Bddpvou Ovn cf s

Bmp!opygr
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpú f rmtX B!: 9122
VTB

SRN/1048447
HpreaTusf bl

Bhf out !JBUB!Dpef
Bddpvou Op/

Bjsqpsujpg Ef qbsuvsf !)Bees/!pg Gjstu Dbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up Cz!Gjstu Dbssjf s	Up!0Cz	Up!0Cz	Dvssf odz	X U0VBM	Pu f s	Ef dmsf e!Wbmvf !Gps!Dbssjbhf	Ef dmsf e!Wbmvf !Gps!Dvtupn t
SEA Alaska Airlines	DEN	AS	USD	PX X	X	NVD	NCV

Bjsqpsujpg Ef t ujobujpo	Gjhiu uEbuf	Gjhiu uEbuf	Bn pvou pg Jbt vsbodf
Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf dft	Hspt t X f jhi u	h no	Dpn n pejuz Jtn !Op/	Di bshf bcrh X f jhi u	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg Hppet)JodmfEjn f ot jpot !ps!Wpmn f *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 23 x 14 x16 x 1 25 x 19 x15 x 1 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	GSX PER Volume: 30.280

Prepaid	Xf jhi uDi bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Upubm!Pu f st!Di bshf t !Evf !Bhf ou

Upubm!Pu f st!Di bshf t !Evf !Dbssjf s
65.40

Upubm!Qsf qbje	Upubm!Dpmmfdu
1,060.66	

Pu f st!Di bshf t
MYC 52.32
SCC 13.08

Ti jqqf st df sajgf t !u bulú f !qbsujdvmbst !polu f !gpdf ti f sf pgbsf !dpsf dúboe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tihobuvsf !pdJ t vjoh!Dbssjf stps!u !Bhf ou

WS Ui JT!TI JQNFOU!EPFT!OPU!DPOUBJO EBOHFSPVT!HPPET

Ui JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvú e!Po!)Ebuf * bu)Qmbdf * Tjhobuvsf !pg Jt vjoh!Dbssjf stps!u !Bhf ou

027-7318 4160

0909293

Alaska Air Cargo™
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

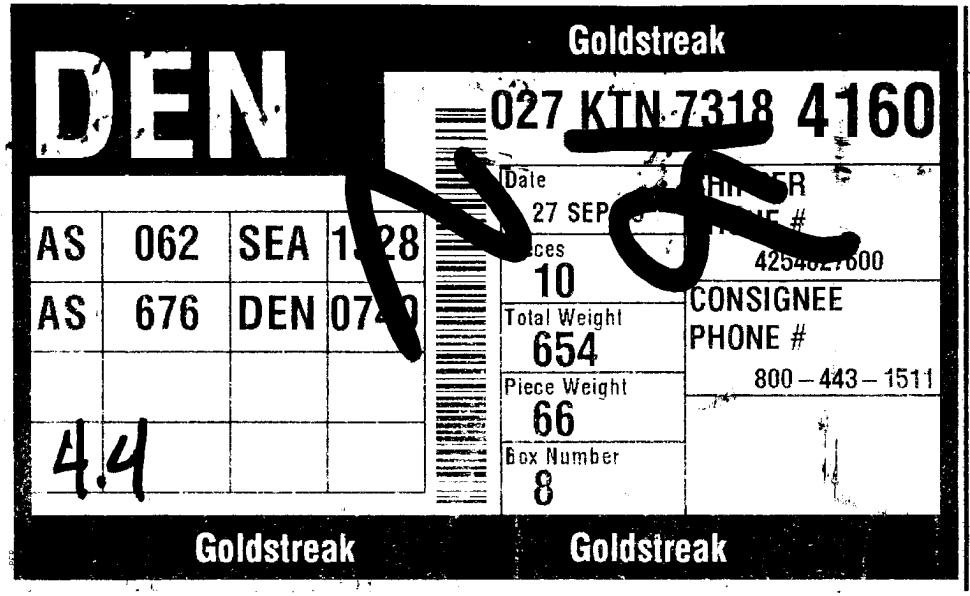
PO Number

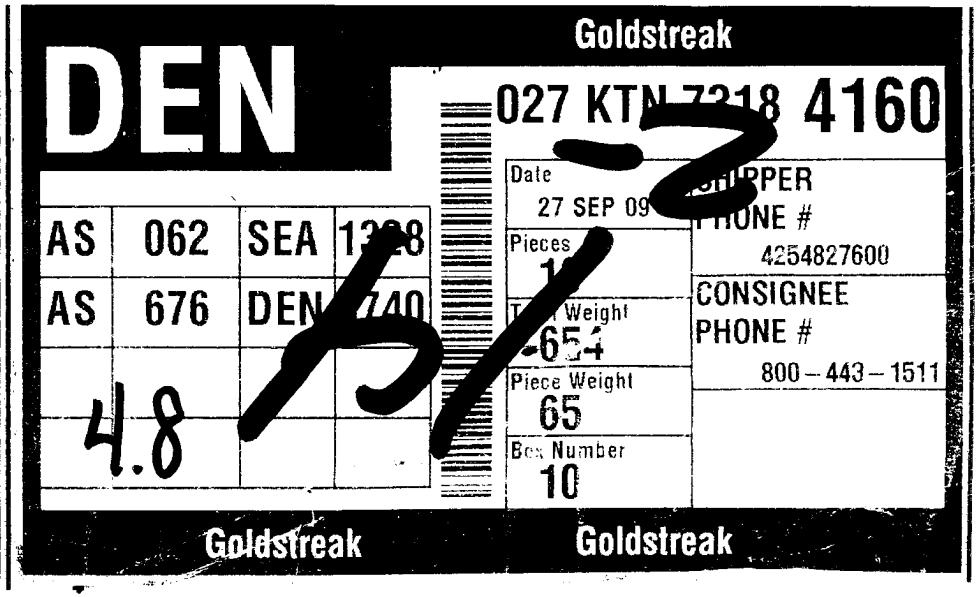
RECEIPT STATEMENT

The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon

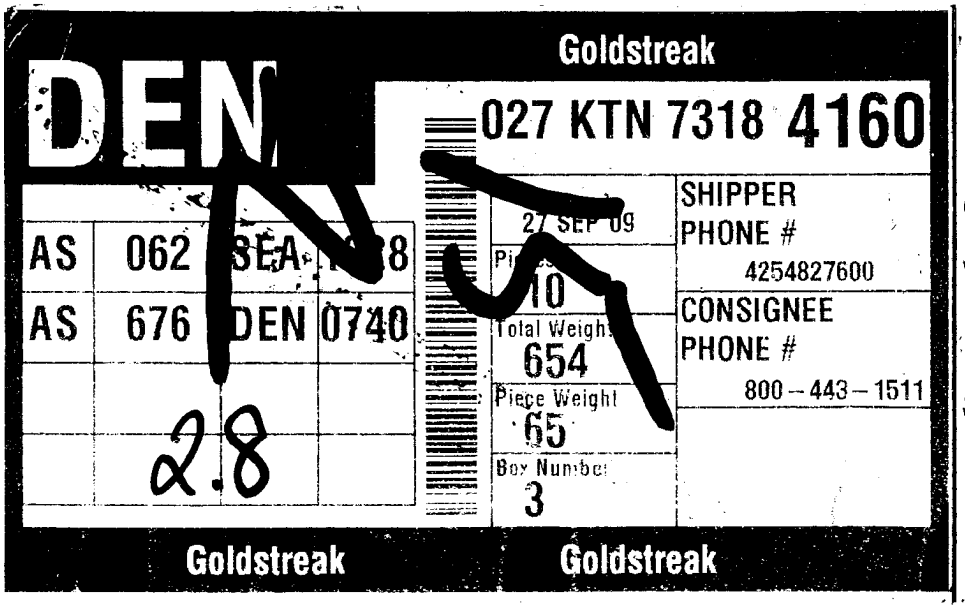
Registration:
Signature:


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.4
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
Total Weight
654
Piece Weight
65
Box Number
10
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.8
Goldstreak
Goldstreak

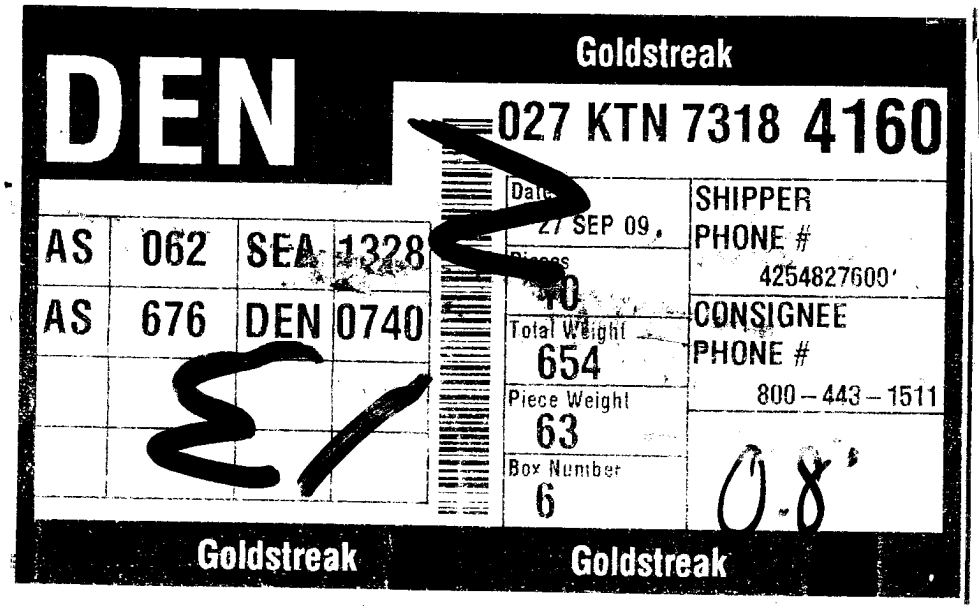

Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
2.8
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 0740
Date
27 SEP 09
Pieces
10
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.2
Goldstreak
Goldstreak


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DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
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0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
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DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
Goldstreak
Goldstreak
Alaska Air Cargo
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0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
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SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
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DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
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Date
27 SEP 09
Pieces
10
Total Weight
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Box Number
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PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
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Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- If the analyte was analyzed for but not detected a “U” is entered.
- QC qualifier -- Specified entries and their meanings are as follows:

  N - Spiked sample recovery not within control limits.

  * - Duplicate analysis (relative percent difference) not within control limits.

  B - The method blank for the analysis contained the analyte of interest above the reporting limit.

TOTAL ORGANIC CARBON

Method EPA415.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909293
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 40 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
CONF-SW-01-KC	0909293-1	09/21/2009	10/12/2009	10/12/2009	N/A	1	4.8	1		40 ml
CONF-SW-01-C	0909293-2	09/21/2009	10/12/2009	10/12/2009	N/A	1	6	1		40 ml
CONF-SW-01-K	0909293-3	09/21/2009	10/12/2009	10/12/2009	N/A	1	3.9	1		40 ml
SPR-SW-01-A	0909293-4	09/22/2009	10/12/2009	10/12/2009	N/A	1	11	1		40 ml
300L-SW-01-A	0909293-5	09/22/2009	10/12/2009	10/12/2009	N/A	1	3	1		40 ml
300L-SW-01-B	0909293-6	09/22/2009	10/12/2009	10/12/2009	N/A	1	3.2	1		40 ml
300L-SW-01-C	0909293-7	09/22/2009	10/12/2009	10/12/2009	N/A	1	3.1	1		40 ml
300L-SW-01-E	0909293-8	09/22/2009	10/12/2009	10/12/2009	N/A	1	1.5	1		40 ml
700L-SW-01-A	0909293-9	09/23/2009	10/12/2009	10/12/2009	N/A	1	2.1	1		40 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *MO0909293-1*

TOTAL ORGANIC CARBON

Method EPA415.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: MO091012-2MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: MO091012-2
QCBatchID: MO091012-2-1
Run ID: MO091012-2A
Cleanup: NONE
Basis: N/A

Sample Aliquot: 40 ml
Final Volume: 40 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
MO091012-2MB	10/12/2009	10/12/2009	N/A	1	1	1	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *MO0909293-1*

TOTAL ORGANIC CARBON

Method EPA415.1

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: MO091012-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12-Oct-09
Date Analyzed: 12-Oct-09
Prep Method: NONE

Prep Batch: MO091012-2
QCBatchID: MO091012-2-1
Run ID: MO091012-2A
Cleanup: NONE
Basis: N/A

Sample Aliquot: 40 ml
Final Volume: 40 ml
Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-35-5	TOTAL ORGANIC CARBON	15	14.7	1		98	85 - 115

Lab ID: MO091012-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12-Oct-09
Date Analyzed: 12-Oct-09
Prep Method: NONE

Prep Batch: MO091012-2
QCBatchID: MO091012-2-1
Run ID: MO091012-2A
Cleanup: NONE
Basis: N/A

Sample Aliquot: 40 ml
Final Volume: 40 ml
Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
10-35-5	TOTAL ORGANIC CARBON	15	14.7	1		98	85 - 115	0

Data Package ID: *MO0909293-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Total Organic Carbon

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of 9 water samples.

2. The samples were received cool and intact by ALS on 09/28/09.

3. The samples had been correctly preserved for the requested analysis.

4. The samples were prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures.

5. The samples were analyzed following MCAWW procedures for the following method:

Analyte	Method	SOP #
TOC (Total Organic Carbon)	415.1	670 Rev 13

6. All standards and solutions were used within their recommended shelf life.

7. The samples were prepared and analyzed within the established hold time for TOC analysis.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

- A preparation (method) blank, laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) were prepared and analyzed with the samples in this preparation batch. There were not more than 20 samples in this preparation batch.
- The method blank associated with this batch was below the reporting limit for the requested analyte. This indicates that no contaminants were introduced to the samples during preparation and analysis.
- The LCS and LCSD were within the acceptance limits for TOC analysis.

- All continuing calibration verifications (CCV) associated with this batch were within the acceptance criteria for the requested analyte. This indicates a valid calibration and stable instrument conditions.

9. Matrix specific quality control procedures.

   Since a sample from this Order Number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Sharon L. Jobes
Organics Primary Data Reviewer

10-19-09
Date

Steven D. White
Organics Final Data Reviewer

10-19-09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01E	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.

REPORT TO: Refer to Page 1

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Sampler(s) LM, WB

Turnaround Standard or Due ____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																														X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X									X	
700L-SW-01-A	9/23	1013		W	HNO3	1																														X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X									X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																														X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

4

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date ____ Time ____
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date ____ Time ____
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/23/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.

REPORT TO:

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Refer to Page 1

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TDC
300L-SW-01-E	9/23	1111	(1)	W	HNO3	2											X	X	X	X	(10)															
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X	
900L-SW-01-A	9/23	1530	(2)	W	HZ SO4	1																														X
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	(11)															
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X	
900L-SW-02-A	9/23	1530	(3)	W	HZ SO4	1																														X
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	(12)															

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

5

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/25/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.

REPORT TO: Refer to Page 1

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers
900L-SW-02-A	9/23	1530	(3)	W	-	4
900L-SW-01-B	9/23	1605	(4)	W	HZ SO4	1
900L-SW-01-B	9/23	1605	↓	W	HN O3	2
900L-SW-01-B	9/23	1605	↓	W	-	4
900L-SW-01-C	9/23	1635	(5)	W	HZ SO4	1
900L-SW-01-C	9/23	1635	↓	W	HN O3	2
900L-SW-01-C	9/23	1635	↓	W	-	4

Circle Analytical Method Above

TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions (Cl, SO4)	Solids: TDS + TSS	pH	Perchlorate	ALKALINITY
															X	X			X
										X	X	X	X	(13)					
															X	X			X
										X	X	X	X	(14)					
															X	X			X

Circle Analytical Method Above

Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	ITC
									X	
										X
									X	
										X
									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature [signature]
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature [signature]
Printed Name Amy Wolf
Date 9/26/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,F,SO4	Solids TDS + TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem TOC
900L-SW-01-D	9/24	0948	6	W	HZ SO4	1																													X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	15															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X								X	
900L-SW-01-E	9/24	1015	7	W	HZ SO4	1																													X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	16															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X								X	
900L-SW-01-F	9/24	1040	8	W	HZ SO4	1																													X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature C Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.

REPORT TO: Refer to Page 1

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS+TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDS
900L-SW-01-F	9/24	1040	8	W	HNO3	2											X	X	X	X	(17)																
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X									X		
700L-SW-01-B	9/24	1115	9	W	HZSO4	1																														X	
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(15)																
700L-SW-01-B	9/24	1115		W	-	4																X	X			X									X		

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

8

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature [signature]
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Received By: (1)
Signature Alaska Airlines
Printed Name _____
Date _____ Time _____
Company _____

Relinquished By: (2)
Signature Alaska Airlines
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature [signature]
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

Circle Analytical Method Above

Circle: Am / Cm / Pu / Th / U

SW8015B GRO DRO Other	SW8260C	SW8260C	SW8270D	SW8081A	SW8082	SW8151A	SW8330 SW8330B SW8321 by LC/MS/MS	SW8260C SW8270D SW8081A SW8151A	SW6010B SW7470A	SW6010B 7470A/7471A E200.7 E245.1	SW6010B 7470A/7471A E200.7 E245.1	SW6020A E200.8	SW6020A E200.8	SW7196A Alkaline Digestion? Y / N	SW9056 E300.0	TDS: E160.1 TSS: E160.2 Total: E160.3	SW9040B SW9045C E150.1	SW6850 by LC/MS/MS E314.0		E901.1	SW9310 E900.0	SW9315 E903.0	E903.1	SW9320 E904.0	D5811	E906.0	SM7500Rn		

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WJO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opvjgz
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpui f mtX B!: 9122
VTB

SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

Bddpvou Op/

BjsqpsuJpgEf qbsuvsf !)Bees'!pgGjstuDbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up	Cz!GjstuDbssjf s	Up!0Cz		Up!0Cz	Dvssf odz		X UOWBM		Pu f s		Ef dmbsf e!Wbmvf !GpsDbssjbhf	Ef dmbsf e!Wbmvf !GpsDvt upn t
SEA	Alaska Airlines	DEN	AS		USD	PX	X		X		NVD	NCV

BjsqpsuJpgEf t ujobujpo	Gjhi uEbuf	Gjhi uEbuf	Bn pvoufgLbt vsbodf
Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf df t	Hspt t X f jhi u	h ro			Dpn n pejuz Jf n !Op/	Di bshf bcmf X f jhi u		S buf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)bdnfEjn f ot jpot !ps!Wpmvn f *
10	654.0	L		Q		654.0		1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 23 x 14 x16 x 1 25 x 19 x15 x 1 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0								961.38	GSX PER Volume: 30.280

Prepaid	X f jhi u Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Pu f s Di bshf t

MYC 52.32
SCC 13.08

UpubmPu f s Di bshf t !Evf !Bhf ou

UpubmPu f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bu u f !qbsujdvmbst !po!u f !gbdf !i f sf pgbsf !dpssf duboe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB U JT!TI JQNFOU!EPFT!OPU!DPOUBJO EBOHFSPVT!HPPET

U JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
1,060.66

UpubmDpmmdu

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qmbdf * Tjhobuvsf !pg Jt vjoh!Dbssjf s!sfsjju !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

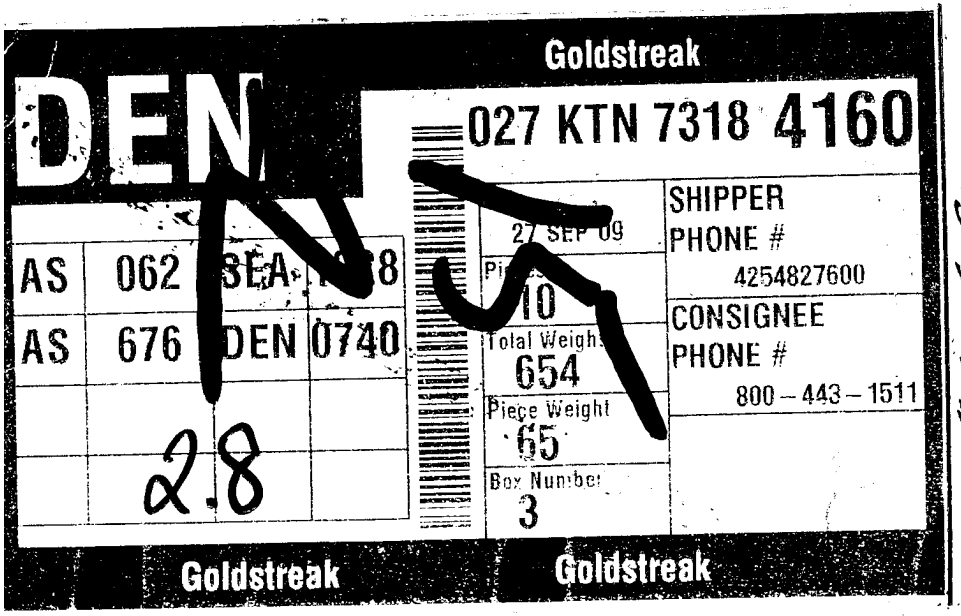
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

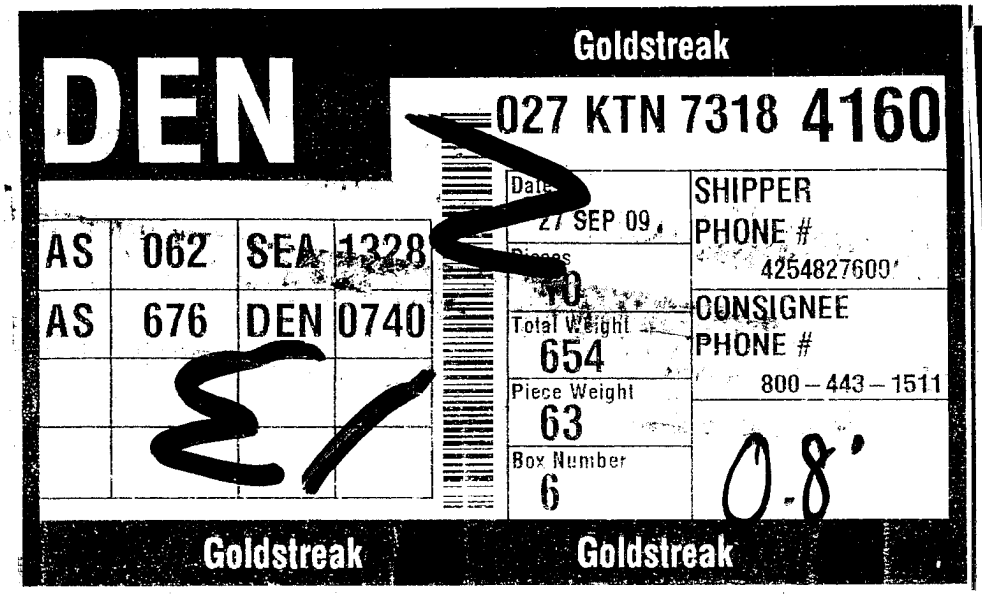

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
Weight
Piece Weight
65
Box Number
10
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weigh
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 0740
4.2
Date
27 SEP 09
Pieces
10
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.8
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.6
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
Box Numb 1
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
1.2
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
800-443-1511
2.2
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

09092 94


DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
1.4
Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- If the analyte was analyzed for but not detected a “U” is entered.
- QC qualifier -- Specified entries and their meanings are as follows:

  N - Spiked sample recovery not within control limits.

  * - Duplicate analysis (relative percent difference) not within control limits.

  B - The method blank for the analysis contained the analyte of interest above the reporting limit.

TOTAL ORGANIC CARBON

Method EPA415.1

Sample Results

Lab Name: ALS Laboratory Group -- FC
Client Name: Tetra Tech MM, Inc.
Client Project ID: Ross Adams
Work Order Number: 0909294
Reporting Basis: As Received
Prep Method: NONE
Final Volume: 40 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
300L-SW-01E	0909294-1	09/23/2009	10/12/2009	10/12/2009	N/A	1	2.6	1		40 ml
900L-SW-01-A	0909294-2	09/23/2009	10/12/2009	10/12/2009	N/A	1	2.2	1		40 ml
900L-SW-02-A	0909294-3	09/23/2009	10/12/2009	10/12/2009	N/A	1	2.2	1		40 ml
900L-SW-01-B	0909294-4	09/23/2009	10/12/2009	10/12/2009	N/A	1	1.8	1		40 ml
900L-SW-01-C	0909294-5	09/23/2009	10/12/2009	10/12/2009	N/A	1	2.4	1		40 ml
900L-SW-01-D	0909294-6	09/24/2009	10/12/2009	10/12/2009	N/A	1	2.1	1		40 ml
900L-SW-01-E	0909294-7	09/24/2009	10/12/2009	10/12/2009	N/A	1	1.2	1		40 ml
900L-SW-01-F	0909294-8	09/24/2009	10/12/2009	10/12/2009	N/A	1	1	1	U	40 ml
700L-SW-01-B	0909294-9	09/24/2009	10/12/2009	10/12/2009	N/A	1	2.7	1		40 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *MO0909294-1*

TOTAL ORGANIC CARBON

Method EPA415.1

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: MO091012-2MB

Sample Matrix: WATER
% Moisture: N/A

Prep Batch: MO091012-2
QCBatchID: MO091012-2-1
Run ID: MO091012-2A
Cleanup: NONE
Basis: N/A

Sample Aliquot: 40 ml
Final Volume: 40 ml
Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
MO091012-2MB	10/12/2009	10/12/2009	N/A	1	1	1	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *MO0909294-1*

Organic Carbon

Method EPA415.1

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: MO091012-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/12/2009
Date Analyzed: 10/12/2009
Prep Method: NONE

Prep Batch: MO091012-2
QCBatchID: MO091012-2-1
Run ID: MO091012-2A
Cleanup: NONE
Basis: N/A
File Name: 10121512

Sample Aliquot: 40 ml
Final Volume: 40 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-35-5	TOTAL ORGANIC CARBON	15	14.7	1		98	85 - 115%

Lab ID: MO091012-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/12/2009
Date Analyzed: 10/12/2009
Prep Method: NONE

Prep Batch: MO091012-2
QCBatchID: MO091012-2-1
Run ID: MO091012-2A
Cleanup: NONE
Basis: N/A
File Name: 10121512

Sample Aliquot: 40 ml
Final Volume: 40 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
10-35-5	TOTAL ORGANIC CARBON	15	14.7	1		98	20	0

Data Package ID: *MO0909294-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Metals

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909293

1. This report consists of 18 water samples for total recoverable or dissolved metals.

2. The samples were received cool and intact by ALS on 09/28/09.

3. The samples for dissolved metals had been filtered prior to receipt. All samples had a pH less than 2 upon receipt.

4. The samples were prepared for analysis based on Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures.

   For analysis by Trace ICP and ICP-MS, the samples were digested following method 200.2 and SOP 806 Rev. 13.

5. The samples were analyzed following Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures.

   Analysis by Trace ICP followed method 200.7 and SOP 807 Rev. 12.

   The relationship between intensity and concentration for each element is established using at least four standards, one of which is a blank solution.

   During sample analysis concentrations are computed by the software and the results are printed in mg/L. The instrument software does not provide a printout which gives both intensity and concentration. The validity of the calibration equation is tested by analyzing the following solutions: a blank, a low level check solution with concentrations near the reporting limit, an Initial Calibration Verification (ICV) standard from a 2nd source standard solution with concentrations near the middle of the analytical range, a Continuing Calibration Verification (CCV) standard with concentrations at two times those in the ICV, and a readback of the highest calibration standard.

These solutions provide verification that the calibration equations are functioning properly throughout the analytical range of the instrument. During sample analysis dilutions are made for analytes found at concentrations above the highest calibration standard. No results are taken from extrapolations beyond the highest standard.

Analysis by ICP-MS followed method 200.8 and SOP 827 Rev. 7.

The relationship between intensity and concentration for each element is established using at least four standards, one of which is a blank solution. A calibration equation relating instrument response to concentration is developed by the instrument software. The equation is a higher order polynomial. This type of equation is used to improve quantitation accuracy at lower concentrations where the relationship between concentration and instrument response is non-linear.

During sample analysis concentrations are computed by the software and the results are printed in ug/L. The validity of the calibration equation is tested by analyzing the following solutions: a blank, a low level check solution with concentrations near the reporting limit, an Initial Calibration Verification (ICV) standard from a 2nd source standard solution with concentrations near the middle of the analytical range, a Continuing Calibration Verification (CCV) standard with concentrations near the middle of the analytical range but different than those in the ICV, and a readback of the highest calibration standard.

These solutions provide verification that the calibration equations are functioning properly throughout the analytical range of the instrument. During sample analysis dilutions are made for analytes found at concentrations above the highest calibration standard. No results are taken from extrapolations beyond the highest standard.

6. All standards and solutions are NIST traceable and were used within their recommended shelf life.

7. The samples were prepared and analyzed within the established hold times.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

- A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in this digestion batch. There were not more than 20 samples in this digestion batch.
- The preparation (method) blank associated with this digestion batch was below the reporting limit for the requested analytes.
- The laboratory control samples associated with this digestion batch were within the acceptance limits. This indicates complete digestions according to the method.
- All initial and continuing calibration blanks associated with each analytical batch were below the practical quantitation limits for the requested analytes.

- All initial and continuing calibration verifications associated with each analytical batch were within the acceptance criteria for the requested analytes. This indicates a valid calibration and stable instrument conditions.
- The interference check samples associated with Method 200.7 were within acceptance criteria.
- The interference check samples associated with Method 200.8 were analyzed, and the high standard readbacks were within acceptance criteria.

9. Matrix specific quality control procedures.

   Samples 0909293-8 and -17 were designated as the quality control samples for each analysis.

   Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

   - Matrix spikes and matrix spike duplicates were digested and analyzed with this batch. All acceptance criteria for accuracy were met.
   - Matrix spike recoveries could not be evaluated for the following analyte:

Analyte	Sample ID
Uranium	0909293-8 & -17

   The concentrations of this analyte in the native samples were greater than four times the concentration of matrix spike added during the digestion. When sample concentration is that much greater than the spike added, spike recoveries may not be accurate. The laboratory control sample indicates that the digestion and analysis were in control.

   - Sample duplicates and matrix spike duplicates were digested and analyzed with this batch. All acceptance criteria for precision were met.
   - Serial dilutions were analyzed with each ICP batch. All acceptance criteria were met.

10. It is a standard practice that samples for ICP-MS are analyzed at a dilution.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Emily Knodel — 11-04-09
Inorganics Primary Data Reviewer — Date

Inorganics Final Data Reviewer — 11/4/09
Date

Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- A “B” is entered if the reported value was obtained from a reading that was less than the Practical Quantitation Limit but greater than or equal to the Method Detection Limit (MDL). If the analyte was analyzed for but not detected a “U” is entered.

- QC qualifier -- Specified entries and their meanings are as follows:

  E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

  M - Duplicate injection precision was not met.

  N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

  Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

  * - Duplicate analysis (relative percent difference) not within control limits.

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909293
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
CONF-SW-01-KC	0909293-1		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-2		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-3		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-4		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-5		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-6		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-7		WATER	22-Sep-09	15:57
300L-SW-01-E	0909293-8		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-9		WATER	23-Sep-09	10:13
CONF-SW-01-KC	0909293-10		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-11		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-12		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-13		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-14		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-15		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-16		WATER	22-Sep-09	15:57
300L-SW-01-D	0909293-17		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-18		WATER	23-Sep-09	10:13

ALS Laboratory Group

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Date 9/24/09 Page 1 of 8

Lab ID 0909293

Project Name/No.	Ross-Adams
REPORT TO:	Aaron Orechwa
PHONE:	970-420-9395
FAX:	970 223 7171
E-MAIL:	aaron.orechwa@tetratech.com
COMPANY:	Tetra Tech MMI
ADDRESS:	3401 Automation Way Suite 100 Ft Collins, CO 80525

Sampler(s): WB & LM

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	Alkalinity
CONF-SW-01-KC	9/21	1338	1	W	HZ SO4	1																				
CONF-SW-01-KC	9/21	1338		W	HN O3	2											X	X	X	X	(10)					
CONF-SW-01-KC	9/21	1338		W	—	4																X	X		X	
CONF-SW-01-C	9/21	1550	2	W	HZ SO4	1																				
CONF-SW-01-C	9/21	1550		W	HN O3	2											X	X	X	X	(11)					
CONF-SW-01-C	9/21	1550		W	—	4																X	X		X	
CONF-SW-01-K	9/21	1626	3	W	HZ SO4	1																				

	Circle Analytical Method Above																									
	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
CONF-SW-01-KC											X
CONF-SW-01-KC											X
CONF-SW-01-KC										X	
CONF-SW-01-C											X
CONF-SW-01-C											X
CONF-SW-01-C										X	
CONF-SW-01-K											X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Dissolved metals filtered in field

Relinquished By: (1)	
Signature	Walt Bowles
Printed Name	Walt Bowles
Date	9/26/09 Time 0733
Company	Tetra Tech FC
Received By: (1)	
Signature	Alaska Air
Printed Name	
Date	Time
Company	

Relinquished By: (2)	
Signature	Alaska Air
Printed Name	
Date	Time
Company	
Received By: (2)	
Signature	
Printed Name	Amy Wolf
Date	9/28/09 Time 1750
Company	ALS-FC

9

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

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TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

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Date 9/24/09 Page 2 of 8

Lab ID 0909293

Project Name/No.:

Sampler(s): LM, WS

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

REFER TO PAGE 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
CONF-SW-01-K	9/21	1626	3	W	HNO3	2											X	X	X	X	(12)															
CONF-SW-01-K	9/21	1626	↓	W	—	4																X	X			X									X	
SPR-SW-01-A	9/22	1258	4	W	HZ SO4	1																														X
SPR-SW-01-A	9/22	1258	|	W	HZ SO3	2											X	X	X	X	(13)															
SPR-SW-01-A	9/22	1258	↓	W	—	4																X	X			X									X	
300L-SW-01-A	9/22	1336	5	W	HNO3	2											X	X	X	X	(14)															
300L-SW-01-A	9/22	1336	↓	W	HZ SO4	1																														X

Circle: Am / Cm / Pu / Th / U	E901.1	SW9310 E900.0	SW9315 E903.0	E903.1	SW9320 E904.0	D5811	E906.0	SM7500Rn
Circle Analytical Method Above								

SW8015B GRO DRO Other	SW8260C	SW8260C	SW8270D	SW8081A	SW8082	SW8151A	SW8330 SW8330B SW8321 by LC/MS/MS	SW8260C SW8270D SW8081A SW8151A	SW6010B SW7470A	SW6010B 7470A/7471A E200.7 E245.1	SW6010B 7470A/7471A E200.7 E245.1	SW6020A E200.8	SW6020A E200.8	SW7196A Alkaline Digestion? Y / N	SW9056 E300.0	TDS: E160.1 TSS: E160.2 Total: E160.3	SW9040B SW9045C E150.1	SW6850 by LC/MS/MS E314.0

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: REFER TO PAGE 1

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Form 202r7 (5/19/09)

Relinquished By: (1)
Signature: Walt Bowles
Printed Name: Walt Bowles
Date: 9/26/09 Time: 0733
Company: Tetra Tech EC

Relinquished By: (2)
Signature: Alaska Air
Printed Name:
Date: Time:
Company:

Received By: (1)
Signature: Alaska Air
Printed Name:
Date: Time:
Company:

Received By: (2)
Signature: Amy Wolf
Printed Name: Amy Wolf
Date: 9/28/09 Time: 1750
Company: ALS-FC

ALS Laboratory Group

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TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 3 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	Refer to page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS&TSS	pH	Perchlorate	ALKALINITY
300L-SW-01-A	9/22	1522	(5)	W	~~HZ~~	4																X	X			X
300L-SW-01-B	9/22	1511	(6)	W	HZ SO4	1																				
300L-SW-01-B	9/22	1511	|	W	HN O3	2											X	X	X	X	(15)					
300L-SW-01-B	9/22	1511	↓	W	—	4																X	X			X
300L-SW-01-C	9/22	1559	(7)	W	HZ SO4	1																				
300L-SW-01-C	9/22	1559	|	W	HN O3	2											X	X	X	X	(16)					
300L-SW-01-C	9/22	1559	↓	W	—	4																X	X			X

Circle Analytical Method Above

Sample ID	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-A										X	
300L-SW-01-B											X
300L-SW-01-B											
300L-SW-01-B										X	
300L-SW-01-C											X
300L-SW-01-C											
300L-SW-01-C										X	

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

SW8015B GRO DRO Other | SW8260C | SW8260C | SW8270D | SW8081A | SW8082 | SW8151A | SW8330 SW8330B SW8321 by LC/MS/MS | SW8260C SW8270D SW8081A SW8151A | SW6010B SW7470A | SW6010B 7470A/7471A E200.7 E245.1 | SW6010B 7470A/7471A E200.7 E245.1 | SW6020A E200.8 | SW6020A E200.8 | SW7196A Alkaline Digestion? Y / N | SW9056 E300.0 | TDS: E160.1 TSS: E160.2 Total: E160.3 | SW9040B SW9045C E150.1 | SW6850 by LC/MS/MS E314.0

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to page 1

8

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature [signature]
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature C Wolf
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

ALS Laboratory Group

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Date 9/24/09 Page 4 of 8

Lab ID 0909293

Project Name/No.:

REPORT TO: Refer to Page 1

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions (Cl/SO4)	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647	(8)	W	HZ SO4	1																														X
300L-SW-01-D	9/22	1647	|	W	HNO3	2											X	X	X	X	(17)																
300L-SW-01-D	9/22	1647	↓	W	—	4																X	X			X									X	
700L-SW-01-A	9/23	1013	(9)	W	HZ SO4	1																														X
700L-SW-01-A	9/23	1013	|	W	HNO3	2											X	X	X	X	(18)															
700L-SW-01-A	9/23	1013	↓	W	—	4																X	X			X									X	
300L-SW-01-E	9/23	1111	(10)	W	HZ SO4	1	(10) ON WORK ORDER 0909294																													X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

6

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date _____ Time _____
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date _____ Time _____
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra-Tech Workorder No: 0909293

Project Manager: AW Initials: CJO Date: 9/29/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3. Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5. Are the **COC and bottle labels complete and legible**?		(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7 Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) ★
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10. Is there **sufficient sample** for the requested analyses?		(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12. Are all samples within **holding times** for the requested analyses?		YES	(NO) •
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17. Were the samples **shipped on ice**?		(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.4	4.2	0.8	0.6	0.8			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	18	18	13	14	14			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ The 1gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

• Samples # 1-3 were received out of hold for TDS/TSS.
↓ #4-8 ↓ ↓ on last day of hold for TDS/TSS
Samples # 9 is ok.

If applicable, was the client contacted? (YES) NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

027 KTN 7318 4160 0909293 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !BddpvouOvn cf s
27442321321
Dvtupn f st !E!Ovn cf s
22651

Not Negotiable
Air Waybill
Jtvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpotjhoff f(t !BddpvouOvn cf s

Bmp!opygr
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpú f rmtX B!: 9122
VTB

SRN/1048447
HpreaTusf bl

Bhf out !JBUB!Dpef

BddpvouOp/

BjsqpsuJpgEf qbsuvsf !)Bees/!pgGjstuDbssjfs*!boe!Sfrvftufe!Spvjoh
Ketchikan

Up Cz!GjstuDbssjfs	Up!0Cz	Up!0Cz	Dvssfodz	X U0VBM	Pufs	Efdmsfe!Wbmvf !GpsfDbssjbhf	Efdmsfe!Wbmvf !GpsfDvtupnt
SEA Alaska Airlines	DEN	AS	USD	PX	X X	NVD	NCV

BjsqpsuJpgEftujobujpo	Gjhiu uEbuf	Gjhiu uEbuf	Bnpvoupg.bt vsbodf
Denver	AS 062/27	AS 678/27	XXX

Iboemjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Opjpg Qjfdft	Hspt t Xfjhiu	h no	Dpn n pejuz Jfn !Op/	Di bshf bcrh Xfjhiu	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboyuz!pgHppet)Jodmf!Ejnfotjpot !ps!Wpmnf *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 23 x 14 x16 x 1 25 x 19 x15 x 1 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	GSX PER Volume: 30.280

Prepaid	Xfjhiu Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

UpubmPufstDi bshft !Evf !Bhf ou

UpubmPufstDi bshft !Evf !Dbssjfs
65.40

UpubmQsf qbje
1,060.66

UpubmDpmmdu

Pufst Di bshft
MYC 52.32
SCC 13.08

Tijqqfstdf sujgft !ubuu f !qbsujdvmbst !polu f !gpdf !i f sf pgbsf !dpsf duboe!ubuinsofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.

For: Tetra Tech EC Inc

Tihobuvsf !odTi iqqf stpsi it !Bhf ou

WS Ui JT!TI JQNFOU!EPFT!OPU!DPOUBJO EBOHFSPVT!HPPET

Ui JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

38!Tfq!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qmbdf * Tjhobuvsf !pgJt vjoh!Dbssjfs spsju !Bhf ou

027-7318 4160

0909293

Alaska Air Cargo™
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

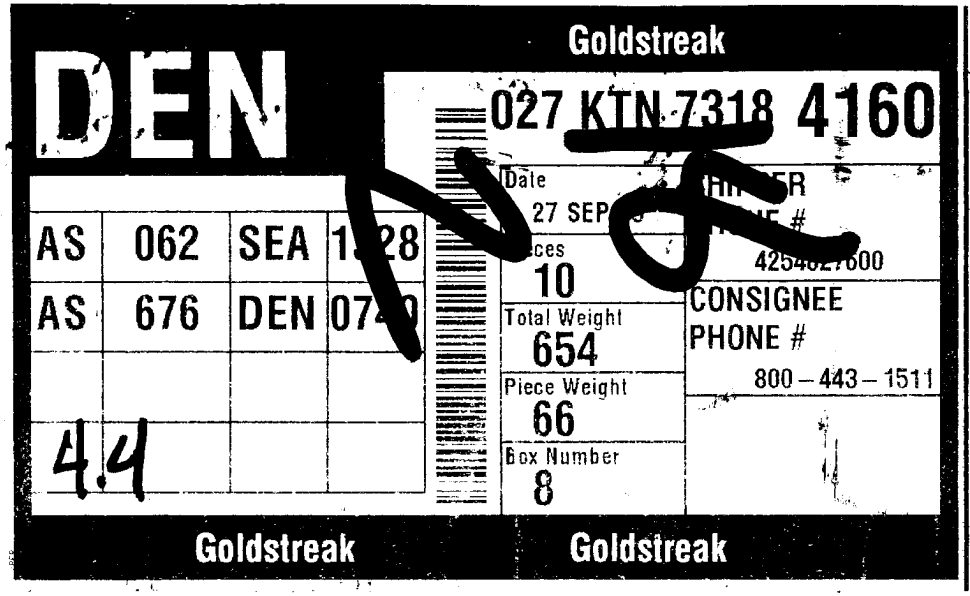
PO Number

RECEIPT STATEMENT

The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon

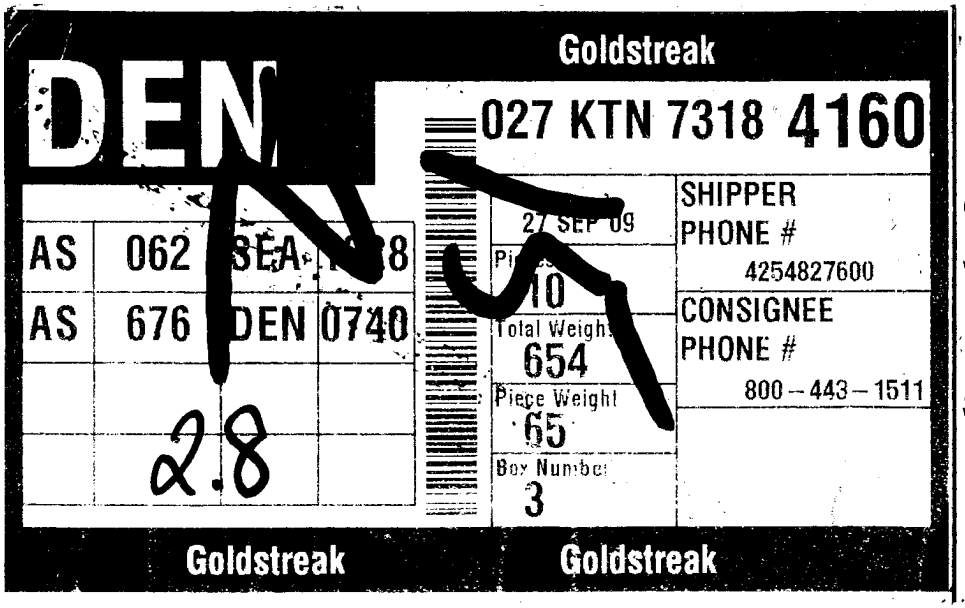
Registration:
Signature:


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
65
Box Number
10
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak

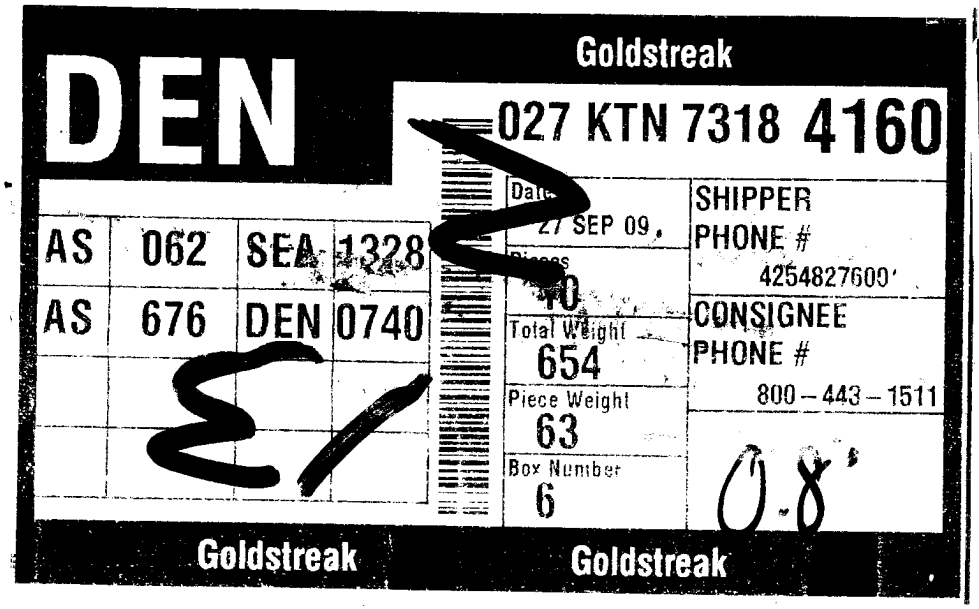
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.2
Date
27 SEP 09
Pieces
10
Piece Weight
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak

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DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
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DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
Goldstreak
Goldstreak
Alaska Air Cargo
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0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
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Goldstreak
Goldstreak
Alaska Air Cargo
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DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
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Date
27 SEP 09
Pieces
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Total Weight
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Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
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Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.17	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0036	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-C
Lab ID: 0909293-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.18	0.2	0.0057	B	
7440-66-6	ZINC	1	0.02	0.02	0.0026	U	

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-K
Lab ID: 0909293-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0046	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.27	0.2	0.0057		
7440-66-6	ZINC	1	0.005	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-A
Lab ID: 0909293-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0068	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-B
Lab ID: 0909293-6

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0078	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-C
Lab ID: 0909293-7

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0058	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.083	0.2	0.0057	B	
7440-66-6	ZINC	1	0.038	0.02	0.0026		

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-A
Lab ID: 0909293-9

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.12	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0052	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-10

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.17	0.2	0.0057	B	
7440-70-2	CALCIUM	1	1.2	1	0.011		
7439-95-4	MAGNESIUM	1	0.28	1	0.0066	B	
7440-66-6	ZINC	1	0.0045	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-C
Lab ID: 0909293-11

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.2	0.2	0.0057	B	
7440-70-2	CALCIUM	1	1.1	1	0.011		
7439-95-4	MAGNESIUM	1	0.27	1	0.0066	B	
7440-66-6	ZINC	1	0.02	0.02	0.0026	U	

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-K
Lab ID: 0909293-12

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-70-2	CALCIUM	1	1.3	1	0.011		
7439-95-4	MAGNESIUM	1	0.27	1	0.0066	B	
7440-66-6	ZINC	1	0.007	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-13

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.24	0.2	0.0057		
7440-70-2	CALCIUM	1	0.4	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.23	1	0.0066	B	
7440-66-6	ZINC	1	0.003	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-A
Lab ID: 0909293-14

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.58	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.15	1	0.0066	B	
7440-66-6	ZINC	1	0.0075	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-B
Lab ID: 0909293-15

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.14	0.2	0.0057	B	
7440-70-2	CALCIUM	1	1	1	0.011		
7439-95-4	MAGNESIUM	1	0.19	1	0.0066	B	
7440-66-6	ZINC	1	0.0059	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-C
Lab ID: 0909293-16

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.14	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.39	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.12	1	0.0066	B	
7440-66-6	ZINC	1	0.0049	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909293-17

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.064	0.2	0.0057	B	
7440-70-2	CALCIUM	1	3.7	1	0.011		
7439-95-4	MAGNESIUM	1	0.32	1	0.0066	B	
7440-66-6	ZINC	1	0.037	0.02	0.0026		

Data Package ID: *IT0909293-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-A
Lab ID: 0909293-18

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.12	0.2	0.0057	B	
7440-70-2	CALCIUM	1	1.4	1	0.011		
7439-95-4	MAGNESIUM	1	0.25	1	0.0066	B	
7440-66-6	ZINC	1	0.014	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.055	0.3	0.019	B	
7440-50-8	COPPER	10	0.53	3	0.3	B	
7440-61-1	URANIUM	10	1.6	0.1	0.0045		

Data Package ID: *IM0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-C
Lab ID: 0909293-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.045	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	0.29	0.1	0.0045		

Data Package ID: *IM0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-K
Lab ID: 0909293-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.056	0.3	0.019	B	
7440-50-8	COPPER	10	0.32	3	0.3	B	
7440-61-1	URANIUM	10	2.9	0.1	0.0045		

Data Package ID: *IM0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.036	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	0.29	0.1	0.0045		

Data Package ID: *IM0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-A
Lab ID: 0909293-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.05	0.3	0.019	B	
7440-50-8	COPPER	10	0.5	3	0.3	B	
7440-61-1	URANIUM	10	5.2	0.1	0.0045		

Data Package ID: *IM0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-B
Lab ID: 0909293-6

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.052	0.3	0.019	B	
7440-50-8	COPPER	10	0.47	3	0.3	B	
7440-61-1	URANIUM	10	2.1	0.1	0.0045		

Data Package ID: *IM0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-C
Lab ID: 0909293-7

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.058	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	7	0.1	0.0045		

Data Package ID: *IM0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.068	0.3	0.019	B	
7440-50-8	COPPER	10	0.56	3	0.3	B	
7440-61-1	URANIUM	10	110	0.1	0.0045		

Data Package ID: *IM0909293-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-A
Lab ID: 0909293-9

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.12	0.3	0.019	B	
7440-50-8	COPPER	10	0.97	3	0.3	B	
7440-61-1	URANIUM	10	0.14	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-10

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.048	0.3	0.019	B	
7440-50-8	COPPER	10	0.55	3	0.3	B	
7440-61-1	URANIUM	10	1.7	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-C
Lab ID: 0909293-11

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.051	0.3	0.019	B	
7440-50-8	COPPER	10	0.39	3	0.3	B	
7440-61-1	URANIUM	10	0.28	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-K
Lab ID: 0909293-12

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.046	0.3	0.019	B	
7440-50-8	COPPER	10	0.33	3	0.3	B	
7440-61-1	URANIUM	10	2.8	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-13

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.04	0.3	0.019	B	
7440-50-8	COPPER	10	0.31	3	0.3	B	
7440-61-1	URANIUM	10	0.21	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-A
Lab ID: 0909293-14

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.054	0.3	0.019	B	
7440-50-8	COPPER	10	0.47	3	0.3	B	
7440-61-1	URANIUM	10	4.4	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-B
Lab ID: 0909293-15

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.05	0.3	0.019	B	
7440-50-8	COPPER	10	0.45	3	0.3	B	
7440-61-1	URANIUM	10	1.9	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-C
Lab ID: 0909293-16

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.053	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	6	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909293-17

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.069	0.3	0.019	B	
7440-50-8	COPPER	10	0.76	3	0.3	B	
7440-61-1	URANIUM	10	100	0.1	0.0045		

Data Package ID: *IM0909293-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-A
Lab ID: 0909293-18

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.053	0.3	0.019	B	
7440-50-8	COPPER	10	0.49	3	0.3	B	
7440-61-1	URANIUM	10	0.38	0.1	0.0045		

Data Package ID: *IM0909293-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0909293

Client Name: Tetra Tech MM, Inc.

ClientProject ID: Ross Adams

Lab ID: IP0911002-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: N/A
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.029	0.2	0.0057	B	
7440-70-2	CALCIUM	1	1	1	0.011	U	
7439-95-4	MAGNESIUM	1	-0.0075	1	0.0066	B	
7440-66-6	ZINC	1	0.0028	0.02	0.0026	B	

Data Package ID: *IT0909293-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0909293

Client Name: Tetra Tech MM, Inc.

ClientProject ID: Ross Adams

Lab ID: IP0911002-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/02/2009
Date Analyzed: 11/02/2009
Prep Method: EPA200.22.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: N/A
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7429-90-5	ALUMINUM	2	2.02	0.2		101	85 - 115%
7440-70-2	CALCIUM	40	39.3	1		98	85 - 115%
7439-95-4	MAGNESIUM	40	39.5	1		99	85 - 115%
7440-66-6	ZINC	0.5	0.442	0.02		88	85 - 115%

Data Package ID: *IT0909293-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
LabID: 0909293-8MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
File Name: 091102A.

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	0.083	B	2.09		0.2	2	100	70 - 130%
7440-66-6	ZINC	0.038		0.511		0.02	0.5	95	70 - 130%

Field ID: 300L-SW-01-E
LabID: 0909293-8MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
File Name: 091102A.

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMINUM	2.06		2	99	0.2	20	2
7440-66-6	ZINC	0.478		0.5	88	0.02	20	7

Data Package ID: *IT0909293-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
LabID: 0909293-17MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
File Name: 091102A.

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	0.064	B	2.08		0.2	2	101	70 - 130%
7440-70-2	CALCIUM	3.7		43.8		1	40	100	70 - 130%
7439-95-4	MAGNESIUM	0.32	B	40.4		1	40	100	70 - 130%
7440-66-6	ZINC	0.037		0.483		0.02	0.5	89	70 - 130%

Field ID: 300L-SW-01-D
LabID: 0909293-17MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 02-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
File Name: 091102A.

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMINUM	2.11		2	102	0.2	20	2
7440-70-2	CALCIUM	45		40	103	1	20	3
7439-95-4	MAGNESIUM	41.1		40	102	1	20	2
7440-66-6	ZINC	0.518		0.5	96	0.02	20	7

Data Package ID: *IT0909293-1*

Metals by 200.7

Method EPA200.7

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/22/2009
Date Extracted: 11/02/2009
Date Analyzed: 11/02/2009

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-3
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7429-90-5	ALUMINUM	0.083	B	0.0881	B	0.2	1		30
7440-66-6	ZINC	0.038		0.0356		0.02	1		30

Data Package ID: *IT0909293-1*

Metals by 200.7

Method EPA200.7

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909293-17D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/22/2009
Date Extracted: 11/02/2009
Date Analyzed: 11/02/2009

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-1
Run ID: IT091102-2A5
Cleanup: NONE
Basis: As Received
File Name: 091102A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7429-90-5	ALUMINUM	0.064	B	0.0708	B	0.2	1		30
7440-70-2	CALCIUM	3.7		3.77		1	1		30
7439-95-4	MAGNESIUM	0.32	B	0.328	B	1	1		30
7440-66-6	ZINC	0.037		0.0358		0.02	1		30

Data Package ID: *IT0909293-1*

Metals by 200.7

Method EPA200.7

Serial Dilution

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8L

Run ID: IT091102-2A5
Date Analyzed: 02-Nov-09
Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7429-90-5	ALUMINUM	0.0827	B	0.156	B		
7440-66-6	ZINC	0.0377		0.0328	B		

Data Package ID: *IT0909293-1*

Metals by 200.7

Method EPA200.7

Serial Dilution

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909293-17L

Run ID: IT091102-2A5
Date Analyzed: 02-Nov-09
Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7429-90-5	ALUMINUM	0.0636	B	0.139	B		
7440-70-2	CALCIUM	3.72		3.75	B		1
7439-95-4	MAGNESIUM	0.319	B	0.249	B		
7440-66-6	ZINC	0.0366		0.0379	B		

Data Package ID: *IT0909293-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Method Blank

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: IP0911002-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: N/A
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.043	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	0.0077	0.1	0.0045	B	

Data Package ID: *IM0909293-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0909293

Client Name: Tetra Tech MM, Inc.

ClientProject ID: Ross Adams

Lab ID: IM0911002-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009
Prep Method: EPA200.22.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: N/A
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-43-9	CADMIUM	20	19.9	0.3		100	85 - 115%
7440-50-8	COPPER	20	20.6	3		103	85 - 115%
7440-61-1	URANIUM	20	19.7	0.1		99	85 - 115%

Data Package ID: *IM0909293-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
LabID: 0909293-8MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
File Name: 03NOV09A

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-43-9	CADMIUM	0.068	B	20.4		0.3	20	101	70 - 130%
7440-50-8	COPPER	0.56	B	20.4		3	20	99	70 - 130%
7440-61-1	URANIUM	110		136		0.1	20	118	70 - 130%

Field ID: 300L-SW-01-E
LabID: 0909293-8MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
File Name: 03NOV09A

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-43-9	CADMIUM	20		20	99	0.3	20	2
7440-50-8	COPPER	20.4		20	99	3	20	0
7440-61-1	URANIUM	137		20	121	0.1	20	1

Data Package ID: *IM0909293-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
LabID: 0909293-17MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
File Name: 03NOV09A

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-43-9	CADMIUM	0.069	B	20.1		0.3	20	100	70 - 130%
7440-50-8	COPPER	0.76	B	20.4		3	20	98	70 - 130%
7440-61-1	URANIUM	100		126		0.1	20	114	70 - 130%

Field ID: 300L-SW-01-D
LabID: 0909293-17MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 22-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
File Name: 03NOV09A

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-43-9	CADMIUM	20.2		20	100	0.3	20	0
7440-50-8	COPPER	20.3		20	97	3	20	1
7440-61-1	URANIUM	126		20	114	0.1	20	0

Data Package ID: *IM0909293-1*

Metals by 200.8

Method EPA200.8

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/22/2009
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7440-43-9	CADMIUM	0.068	B	0.0731	B	0.3	10		30
7440-50-8	COPPER	0.56	B	0.587	B	3	10		30
7440-61-1	URANIUM	110		112		0.1	10	0	30

Data Package ID: *IM0909293-1*

Metals by 200.8

Method EPA200.8

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909293-17D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/22/2009
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009

Prep Batch: IP0911002-1
QCBatchID: IP0911002-1-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7440-43-9	CADMIUM	0.069	B	0.079	B	0.3	10		30
7440-50-8	COPPER	0.76	B	0.746	B	3	10		30
7440-61-1	URANIUM	100		103		0.1	10	1	30

Data Package ID: *IM0909293-1*

Metals by 200.8

Method EPA200.8

Serial Dilution

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8L

Run ID: IM091103-1A2
Date Analyzed: 03-Nov-09
Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7440-43-9	CADMIUM	0.00000681	B	0.0000205	B		
7440-50-8	COPPER	0.0000556	B	0.000142	U		
7440-61-1	URANIUM	0.0112		0.0113			0

Data Package ID: *IM0909293-1*

Metals by 200.8

Method EPA200.8

Serial Dilution

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909293-17L

Run ID: IM091103-1A2
Date Analyzed: 03-Nov-09
Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7440-43-9	CADMIUM	0.00000686	B	0.0000255	B		
7440-50-8	COPPER	0.0000759	B	0.000142	U		
7440-61-1	URANIUM	0.0103		0.0103			1

Data Package ID: *IM0909293-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Metals

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of 18 water samples for total recoverable or dissolved metals.

2. The samples were received cool and intact by ALS on 09/28/09.

3. The samples for dissolved metals had been filtered prior to receipt. All samples had a pH less than 2 upon receipt.

4. The samples were prepared for analysis based on Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures.

   For analysis by Trace ICP and ICP-MS, the samples were digested following method 200.2 and SOP 806 Rev. 13.

5. The samples were analyzed following Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures.

   Analysis by Trace ICP followed method 200.7 and SOP 807 Rev. 12.

   The relationship between intensity and concentration for each element is established using at least four standards, one of which is a blank solution.

   During sample analysis concentrations are computed by the software and the results are printed in mg/L. The instrument software does not provide a printout which gives both intensity and concentration. The validity of the calibration equation is tested by analyzing the following solutions: a blank, a low level check solution with concentrations near the reporting limit, an Initial Calibration Verification (ICV) standard from a 2nd source standard solution with concentrations near the middle of the analytical range, a Continuing Calibration Verification (CCV) standard with concentrations at two times those in the ICV, and a readback of the highest calibration standard.

These solutions provide verification that the calibration equations are functioning properly throughout the analytical range of the instrument. During sample analysis dilutions are made for analytes found at concentrations above the highest calibration standard. No results are taken from extrapolations beyond the highest standard.

Analysis by ICP-MS followed method 200.8 and SOP 827 Rev. 7.

The relationship between intensity and concentration for each element is established using at least four standards, one of which is a blank solution. A calibration equation relating instrument response to concentration is developed by the instrument software. The equation is a higher order polynomial. This type of equation is used to improve quantitation accuracy at lower concentrations where the relationship between concentration and instrument response is non-linear.

During sample analysis concentrations are computed by the software and the results are printed in ug/L. The validity of the calibration equation is tested by analyzing the following solutions: a blank, a low level check solution with concentrations near the reporting limit, an Initial Calibration Verification (ICV) standard from a 2nd source standard solution with concentrations near the middle of the analytical range, a Continuing Calibration Verification (CCV) standard with concentrations near the middle of the analytical range but different than those in the ICV, and a readback of the highest calibration standard.

These solutions provide verification that the calibration equations are functioning properly throughout the analytical range of the instrument. During sample analysis dilutions are made for analytes found at concentrations above the highest calibration standard. No results are taken from extrapolations beyond the highest standard.

6. All standards and solutions are NIST traceable and were used within their recommended shelf life.

7. The samples were prepared and analyzed within the established hold times.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

- A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in this digestion batch. There were not more than 20 samples in this digestion batch.
- The preparation (method) blank associated with this digestion batch was below the reporting limit for the requested analytes.
- The laboratory control samples associated with this digestion batch were within the acceptance limits. This indicates complete digestions according to the method.
- All initial and continuing calibration blanks associated with each analytical batch were below the practical quantitation limits for the requested analytes.

- All initial and continuing calibration verifications associated with each analytical batch were within the acceptance criteria for the requested analytes. This indicates a valid calibration and stable instrument conditions.
- The interference check samples associated with Method 200.7 were within acceptance criteria.
- The interference check samples associated with Method 200.8 were analyzed, and the high standard readbacks were within acceptance criteria.

9. Matrix specific quality control procedures.

   Samples 0909294-7 and -16 were designated as the quality control samples for each analysis.

   Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

   - Matrix spikes and matrix spike duplicates were digested and analyzed with this batch. All acceptance criteria for accuracy were met.
   - Sample duplicates and matrix spike duplicates were digested and analyzed with this batch. All acceptance criteria for precision were met.
   - Serial dilutions were analyzed with each ICP batch. All acceptance criteria were met with the following exceptions:

Analyte	Sample ID
Calcium	0909294-16L
Sodium	0909294-16L

   The native sample results are flagged for serial dilution failure.

   The concentrations of calcium and sodium in the diluted and/or undiluted samples were below the PQL. These relatively low concentrations may have contributed to the greater than 10% difference between the two sets of results.

10. It is a standard practice that samples for ICP-MS are analyzed at a dilution.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Emily Knodel
Inorganics Primary Data Reviewer

11-04-09
Date

Inorganics Final Data Reviewer

11/4/09
Date

Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- A “B” is entered if the reported value was obtained from a reading that was less than the Practical Quantitation Limit but greater than or equal to the Method Detection Limit (MDL). If the analyte was analyzed for but not detected a “U” is entered.

- QC qualifier -- Specified entries and their meanings are as follows:

  E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

  M - Duplicate injection precision was not met.

  N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

  Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

  * - Duplicate analysis (relative percent difference) not within control limits.

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01-D	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-D	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-C	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due

Disposal By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																														X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X									X	
700L-SW-01-A	9/23	1013		W	HNO3	1																														X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X									X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																														X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/23/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

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TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.

REPORT TO:

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Refer to Page 1

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TDC
300L-SW-01-E	9/23	1111	(1)	W	HNO3	2											X	X	X	X	(10)															
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X	
900L-SW-01-A	9/23	1530	(2)	W	HZ SO4	1																														X
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	(11)															
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X	
900L-SW-02-A	9/23	1530	(3)	W	HZ SO4	1																														X
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	(12)															

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

Relinquished By: (1)		Relinquished By: (2)	
Signature	Walter Bowles	Signature	Alaska Air
Printed Name	Walter Bowles	Printed Name	
Date	9/26/09	Date	
Time	0733	Time	
Company	Tetra Tech EC	Company	

Received By: (1)		Received By: (2)	
Signature	Alaska Air	Signature	Amy Wolf
Printed Name		Printed Name	Amy Wolf
Date		Date	9/25/09
Time		Time	1750
Company		Company	ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.

REPORT TO: Refer to Page 1

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers
900L-SW-C2-A	9/23	1530	(3)	W	-	4
900L-SW-01-B	9/23	1605	(4)	W	HZ SO4	1
900L-SW-01-B	9/23	1605	↓	W	HN O3	2
900L-SW-01-B2	9/23	1605	↓	W	-	4
900L-SW-01-C	9/23	1635	(5)	W	HZ SO4	1
900L-SW-01-C	9/23	1635	↓	W	HN O3	2
900L-SW-01-C	9/23	1635	↓	W	-	4

Circle Analytical Method Above

TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions (CL+SO4)	Solids TDS+TSS	pH	Perchlorate	ALKALINITY
															X	X			X
										X	X	X	X	(13)					
															X	X			X
										X	X	X	X	(14)					
															X	X			X

Circle Analytical Method Above

Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	ITC
									X	
										X
									X	
										X
									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

8

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature [signature]	Signature Alaska Air
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature [signature]
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/26/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

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Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Refer to Page 1

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,F,SO4	Solids TDS + TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem TOC
900L-SW-01-D	9/24	0948	6	W	HZ SO4	1																													X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	15															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X								X	
900L-SW-01-E	9/24	1015	7	W	HZ SO4	1																													X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	16															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X								X	
900L-SW-01-F	9/24	1040	8	W	HZ SO4	1																													X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

6

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature C Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS, TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem	TDS
900L-SW-01-F	9/24	1040	(8)	W	HNO3	2											X	X	X	X	(17)															
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X									X	
700L-SW-01-B	9/24	1115	(9)	W	HZSO4	1																														X
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(15)															
700L-SW-01-B	9/24	1115		W	-	4																X	X			X									X	

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

10

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Received By: (1)
Signature Alaska Airlines
Printed Name
Date Time
Company

Relinquished By: (2)
Signature Alaska Airlines
Printed Name
Date Time
Company

Received By: (2)
Signature Cwolf
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WJO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: [signature] 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

11

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opvjgz
Uf m

Issuing Carrier's Agent and City

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Cpui f mtX B!: 9122
VTB

SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

Bddpvou Op/

Bjsqpsu Jpg Ef qbsuvsf !)Bees'!pg Gjstu Dbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up	Cz!Gjstu Dbssjf s	Up!0Cz		Up!0Cz	Dvssf odz		X U0WBM		Pu f s		Ef dmbsf e!Wbmvf !Gps!Dbssjbhf	Ef dmbsf e!Wbmvf !Gps!Dvt upn t
SEA	Alaska Airlines	DEN	AS		USD	PX	X		X		NVD	NCV

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Denver	AS 062/27	AS 678/27	XXX

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KEEP COOL
NOA 1-800-443-1511

TDJ

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UpubmPu f s Di bshf t !Evf !Bhf ou

UpubmPu f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bu u f !qbsujdvmbst !po!u f !gdof !i f sf pgbsf !dpssf du boe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB U JT!TI JQNFOU!EPFT!OPU!DPOUBJO EBOHFSPVT!HPPET

U JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
1,060.66

UpubmDpmmdu

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvu e!Po!)Ebuf * bu)Qbdf * Tjhobuvsf !pg Jt vjoh!Dbssjf s psjju !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

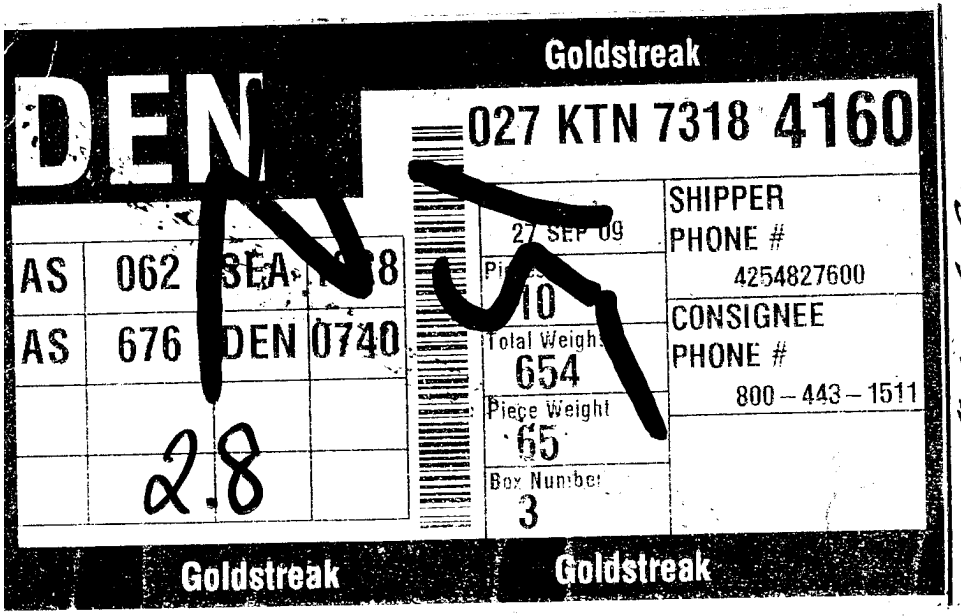
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

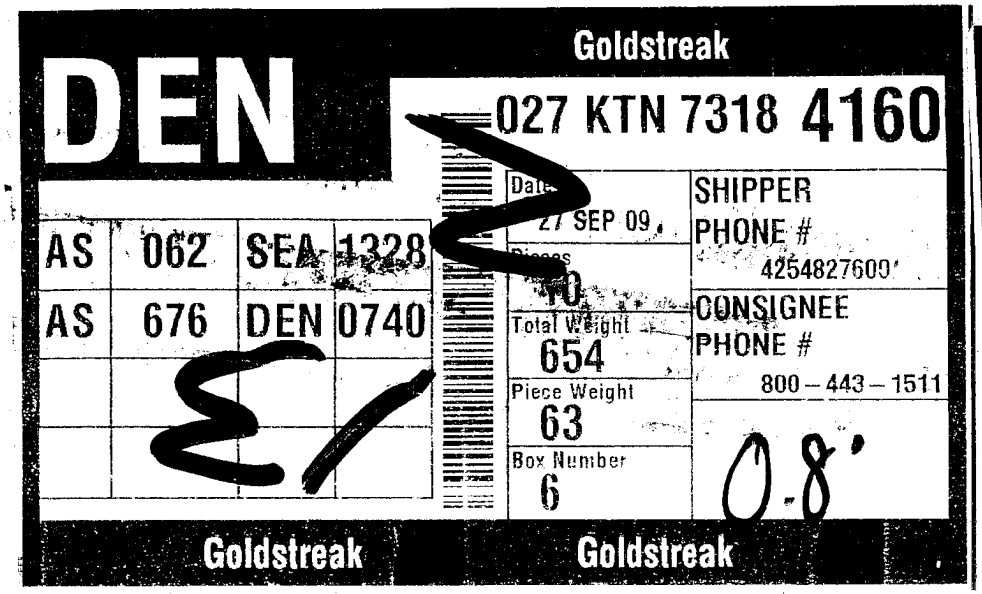

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Piece Weight
65
Box Number
10
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
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CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
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AS 676 DEN 0740
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27 SEP 09
Pieces
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Piece Weight
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Box Number
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SHIPPER
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Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


Goldstreak
DEN
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AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
63
Box Number
6
SHIPPER
PHONE #
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CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
58
Box Number
4
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
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Pieces
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SHIPPER
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Goldstreak
DEN
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AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
67
Box Number
2
SHIPPER
CONSIGNEE
PHONE #
Goldstreak
Goldstreak


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027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
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Pieces
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Box Number
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SHIPPER
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Alaska Air Cargo
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DEN
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AS 062 SEA 1328
AS 676 DEN 0740
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Date
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Pieces
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Total Weight
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Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909294-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.14	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0045	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-A
Lab ID: 0909294-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.13	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0028	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-02-A
Lab ID: 0909294-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.14	0.2	0.0057	B	
7440-66-6	ZINC	1	0.017	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-B
Lab ID: 0909294-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.16	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0072	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-C
Lab ID: 0909294-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-66-6	ZINC	1	0.0048	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-D
Lab ID: 0909294-6

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.13	0.2	0.0057	B	
7440-66-6	ZINC	1	0.004	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.23	0.2	0.0057		
7440-38-2	ARSENIC	1	0.01	0.01	0.0021	U	
7439-89-6	IRON	1	0.046	0.1	0.0039	B	
7439-96-5	MANGANESE	1	0.014	0.01	0.00016		
7439-98-7	MOLYBDENUM	1	0.01	0.01	0.0006	U	
7440-62-2	VANADIUM	1	0.01	0.01	0.00063	U	
7440-66-6	ZINC	1	0.011	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-8

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.19	0.2	0.0057	B	
7440-38-2	ARSENIC	1	0.01	0.01	0.0021	U	
7439-89-6	IRON	1	0.0067	0.1	0.0039	B	
7439-96-5	MANGANESE	1	0.012	0.01	0.00016		
7439-98-7	MOLYBDENUM	1	0.01	0.01	0.0006	U	
7440-62-2	VANADIUM	1	0.01	0.01	0.00063	U	
7440-66-6	ZINC	1	0.034	0.02	0.0026		

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-B
Lab ID: 0909294-9

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.16	0.2	0.0057	B	
7440-66-6	ZINC	1	0.016	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01E
Lab ID: 0909294-10

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.14	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.36	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.16	1	0.0066	B	
7440-66-6	ZINC	1	0.0032	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-A
Lab ID: 0909294-11

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.14	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.27	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.14	1	0.0066	B	
7440-66-6	ZINC	1	0.0035	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-02-A
Lab ID: 0909294-12

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.24	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.16	1	0.0066	B	
7440-66-6	ZINC	1	0.0065	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-B
Lab ID: 0909294-13

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.2	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.11	1	0.0066	B	
7440-66-6	ZINC	1	0.02	0.02	0.0026	U	

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-D
Lab ID: 0909294-14

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.29	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.14	1	0.0066	B	
7440-66-6	ZINC	1	0.0049	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-C
Lab ID: 0909294-15

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.13	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.26	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.18	1	0.0066	B	
7440-66-6	ZINC	1	0.0026	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-16

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.19	0.2	0.0057	B	
7440-38-2	ARSENIC	1	0.01	0.01	0.0021	U	
7440-70-2	CALCIUM	1	0.69	1	0.011	B	E
7439-89-6	IRON	1	0.0044	0.1	0.0039	B	
7439-95-4	MAGNESIUM	1	0.24	1	0.0066	B	
7439-96-5	MANGANESE	1	0.0099	0.01	0.00016	B	
7439-98-7	MOLYBDENUM	1	0.01	0.01	0.0006	U	
7440-09-7	POTASSIUM	1	1	1	0.09	U	
7440-23-5	SODIUM	1	1.5	1	0.0069		E
7440-62-2	VANADIUM	1	0.01	0.01	0.00063	U	
7440-66-6	ZINC	1	0.013	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-17

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.18	0.2	0.0057	B	
7440-38-2	ARSENIC	1	0.0022	0.01	0.0021	B	
7440-70-2	CALCIUM	1	1.5	1	0.011		
7439-89-6	IRON	1	0.1	0.1	0.0039	U	
7439-95-4	MAGNESIUM	1	0.27	1	0.0066	B	
7439-96-5	MANGANESE	1	0.011	0.01	0.00016		
7439-98-7	MOLYBDENUM	1	0.01	0.01	0.0006	U	
7440-09-7	POTASSIUM	1	1	1	0.09	U	
7440-23-5	SODIUM	1	1.4	1	0.0069		
7440-62-2	VANADIUM	1	0.01	0.01	0.00063	U	
7440-66-6	ZINC	1	0.033	0.02	0.0026		

Data Package ID: *IT0909294-1*

Dissolved Metals by 200.7

Method EPA200.7 Revision 4.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-B
Lab ID: 0909294-18

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.15	0.2	0.0057	B	
7440-70-2	CALCIUM	1	0.51	1	0.011	B	
7439-95-4	MAGNESIUM	1	0.19	1	0.0066	B	
7440-66-6	ZINC	1	0.011	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909294-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.053	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	1.7	0.1	0.0045		

Data Package ID: *IM0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-A
Lab ID: 0909294-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.044	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	1.5	0.1	0.0045		

Data Package ID: *IM0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-02-A
Lab ID: 0909294-3

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.049	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	1.5	0.1	0.0045		

Data Package ID: *IM0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-B
Lab ID: 0909294-4

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.048	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	0.19	0.1	0.0045		

Data Package ID: *IM0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-C
Lab ID: 0909294-5

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.046	0.3	0.019	B	
7440-50-8	COPPER	10	0.42	3	0.3	B	
7440-61-1	URANIUM	10	1.6	0.1	0.0045		

Data Package ID: *IM0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-D
Lab ID: 0909294-6

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.048	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	0.12	0.1	0.0045		

Data Package ID: *IM0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-36-0	ANTIMONY	10	0.3	0.3	0.082	U	
7440-39-3	BARIUM	10	8.7	1	0.08		
7440-43-9	CADMIUM	10	0.061	0.3	0.019	B	
7440-47-3	CHROMIUM	10	10	10	0.22	U	
7440-48-4	COBALT	10	1	1	0.19	U	
7440-50-8	COPPER	10	3	3	0.3	U	
7439-92-1	LEAD	10	0.45	0.5	0.025	B	
7440-02-0	NICKEL	10	5	5	0.44	U	
7782-49-2	SELENIUM	10	0.11	1	0.082	B	
7440-22-4	SILVER	10	0.03	0.1	0.0083	B	
7440-28-0	THALLIUM	10	0.014	0.2	0.012	B	
7440-61-1	URANIUM	10	8	0.1	0.0045		
7440-41-7	BERYLLIUM	10	0.28	3	0.12	B	

Data Package ID: *IM0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-8

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-36-0	ANTIMONY	10	0.3	0.3	0.082	U	
7440-39-3	BARIUM	10	13	1	0.08		
7440-43-9	CADMIUM	10	0.074	0.3	0.019	B	
7440-47-3	CHROMIUM	10	10	10	0.22	U	
7440-48-4	COBALT	10	1	1	0.19	U	
7440-50-8	COPPER	10	3	3	0.3	U	
7439-92-1	LEAD	10	0.67	0.5	0.025		
7440-02-0	NICKEL	10	5	5	0.44	U	
7782-49-2	SELENIUM	10	1	1	0.082	U	
7440-22-4	SILVER	10	0.025	0.1	0.0083	B	
7440-28-0	THALLIUM	10	0.2	0.2	0.012	U	
7440-61-1	URANIUM	10	95	0.1	0.0045		
7440-41-7	BERYLLIUM	10	0.3	3	0.12	B	

Data Package ID: *IM0909294-1*

Total Recoverable Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-B
Lab ID: 0909294-9

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.048	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	25	0.1	0.0045		

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01E
Lab ID: 0909294-10

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.059	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	1.6	0.1	0.0045		

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-A
Lab ID: 0909294-11

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.053	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	1.4	0.1	0.0045		

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-02-A
Lab ID: 0909294-12

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.052	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	1.5	0.1	0.0045		

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-B
Lab ID: 0909294-13

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.054	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	0.18	0.1	0.0045		

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-D
Lab ID: 0909294-14

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 23-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.051	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	1.4	0.1	0.0045		

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-C
Lab ID: 0909294-15

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.052	0.3	0.019	B	
7440-50-8	COPPER	10	3	3	0.3	U	
7440-61-1	URANIUM	10	0.12	0.1	0.0045		

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-16

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-36-0	ANTIMONY	10	0.3	0.3	0.082	U	
7440-39-3	BARIUM	10	8.7	1	0.08		
7440-43-9	CADMIUM	10	0.073	0.3	0.019	B	
7440-47-3	CHROMIUM	10	10	10	0.22	U	
7440-48-4	COBALT	10	1	1	0.19	U	
7440-50-8	COPPER	10	0.86	3	0.3	B	
7439-92-1	LEAD	10	0.28	0.5	0.025	B	
7440-02-0	NICKEL	10	0.59	5	0.44	B	
7782-49-2	SELENIUM	10	1	1	0.082	U	
7440-22-4	SILVER	10	0.025	0.1	0.0083	B	
7440-28-0	THALLIUM	10	0.2	0.2	0.012	U	
7440-61-1	URANIUM	10	3.6	0.1	0.0045		
7440-41-7	BERYLLIUM	10	0.27	3	0.12	B	

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-17

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-36-0	ANTIMONY	10	0.3	0.3	0.082	U	
7440-39-3	BARIUM	10	13	1	0.08		
7440-43-9	CADMIUM	10	0.075	0.3	0.019	B	
7440-47-3	CHROMIUM	10	10	10	0.22	U	
7440-48-4	COBALT	10	1	1	0.19	U	
7440-50-8	COPPER	10	3	3	0.3	U	
7439-92-1	LEAD	10	0.35	0.5	0.025	B	
7440-02-0	NICKEL	10	5	5	0.44	U	
7782-49-2	SELENIUM	10	1	1	0.082	U	
7440-22-4	SILVER	10	0.031	0.1	0.0083	B	
7440-28-0	THALLIUM	10	0.019	0.2	0.012	B	
7440-61-1	URANIUM	10	59	0.1	0.0045		
7440-41-7	BERYLLIUM	10	0.29	3	0.12	B	

Data Package ID: *IM0909294-1*

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-B
Lab ID: 0909294-18

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-43-9	CADMIUM	10	0.06	0.3	0.019	B	
7440-50-8	COPPER	10	0.36	3	0.3	B	
7440-61-1	URANIUM	10	19	0.1	0.0045		

Data Package ID: *IM0909294-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0909294

Client Name: Tetra Tech MM, Inc.

ClientProject ID: Ross Adams

Lab ID: IP091102-4MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: N/A
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7429-90-5	ALUMINUM	1	0.026	0.2	0.0057	B	
7440-38-2	ARSENIC	1	0.01	0.01	0.0021	U	
7440-70-2	CALCIUM	1	0.039	1	0.011	B	
7439-89-6	IRON	1	0.1	0.1	0.0039	U	
7439-95-4	MAGNESIUM	1	0.029	1	0.0066	B	
7439-96-5	MANGANESE	1	0.00092	0.01	0.00016	B	
7439-98-7	MOLYBDENUM	1	0.01	0.01	0.0006	U	
7440-09-7	POTASSIUM	1	1	1	0.09	U	
7440-23-5	SODIUM	1	-0.031	1	0.0069	B	
7440-62-2	VANADIUM	1	0.01	0.01	0.00063	U	
7440-66-6	ZINC	1	0.0032	0.02	0.0026	B	

Data Package ID: *IT0909294-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0909294

Client Name: Tetra Tech MM, Inc.

ClientProject ID: Ross Adams

Lab ID: IP091102-4LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009
Prep Method: EPA200.22.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: N/A
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7429-90-5	ALUMINUM	2	2.11	0.2		106	85 - 115%
7440-38-2	ARSENIC	2	2.05	0.01		102	85 - 115%
7440-70-2	CALCIUM	40	41.8	1		105	85 - 115%
7439-89-6	IRON	1	1.03	0.1		103	85 - 115%
7439-95-4	MAGNESIUM	40	41.5	1		104	85 - 115%
7439-96-5	MANGANESE	0.5	0.496	0.01		99	85 - 115%
7439-98-7	MOLYBDENUM	1	1	0.01		100	85 - 115%
7440-09-7	POTASSIUM	40	37.4	1		94	85 - 115%
7440-23-5	SODIUM	40	36.5	1		91	85 - 115%
7440-62-2	VANADIUM	0.5	0.516	0.01		103	85 - 115%
7440-66-6	ZINC	0.5	0.495	0.02		99	85 - 115%

Data Package ID: *IT0909294-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
LabID: 0909294-7MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
File Name: 091103A.

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	0.23		2.31		0.2	2	104	70 - 130%
7440-38-2	ARSENIC	0.01	U	2.03		0.01	2	101	70 - 130%
7439-89-6	IRON	0.046	B	1.06		0.1	1	102	70 - 130%
7439-96-5	MANGANESE	0.014		0.5		0.01	0.5	97	70 - 130%
7439-98-7	MOLYBDENUM	0.01	U	0.998		0.01	1	100	70 - 130%
7440-62-2	VANADIUM	0.01	U	0.509		0.01	0.5	102	70 - 130%
7440-66-6	ZINC	0.011	B	0.484		0.02	0.5	95	70 - 130%

Field ID: 900L-SW-01-E
LabID: 0909294-7MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
File Name: 091103A.

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMINUM	2.28		2	103	0.2	20	1
7440-38-2	ARSENIC	1.98		2	99	0.01	20	2
7439-89-6	IRON	1.05		1	100	0.1	20	2
7439-96-5	MANGANESE	0.492		0.5	96	0.01	20	2
7439-98-7	MOLYBDENUM	0.978		1	98	0.01	20	2
7440-62-2	VANADIUM	0.5		0.5	100	0.01	20	2
7440-66-6	ZINC	0.476		0.5	93	0.02	20	2

Data Package ID: *IT0909294-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
LabID: 0909294-16MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
File Name: 091103A.

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7429-90-5	ALUMINUM	0.19	B	2.23		0.2	2	102	70 - 130%
7440-38-2	ARSENIC	0.01	U	1.97		0.01	2	99	70 - 130%
7440-70-2	CALCIUM	0.69	B	40.9		1	40	101	70 - 130%
7439-89-6	IRON	0.0044	B	0.998		0.1	1	99	70 - 130%
7439-95-4	MAGNESIUM	0.24	B	40.1		1	40	100	70 - 130%
7439-96-5	MANGANESE	0.0099	B	0.484		0.01	0.5	95	70 - 130%
7439-98-7	MOLYBDENUM	0.01	U	0.974		0.01	1	97	70 - 130%
7440-09-7	POTASSIUM	1	U	36.9		1	40	92	70 - 130%
7440-23-5	SODIUM	1.5		38.1		1	40	92	70 - 130%
7440-62-2	VANADIUM	0.01	U	0.498		0.01	0.5	100	70 - 130%
7440-66-6	ZINC	0.013	B	0.468		0.02	0.5	91	70 - 130%

Data Package ID: *IT0909294-1*

Metals by 200.7

Method EPA200.7 Revision 4.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
LabID: 0909294-16MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
File Name: 091103A.

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7429-90-5	ALUMINUM	2.23		2	102	0.2	20	0
7440-38-2	ARSENIC	1.96		2	98	0.01	20	1
7440-70-2	CALCIUM	40.8		40	100	1	20	0
7439-89-6	IRON	0.996		1	99	0.1	20	0
7439-95-4	MAGNESIUM	40		40	99	1	20	0
7439-96-5	MANGANESE	0.483		0.5	95	0.01	20	0
7439-98-7	MOLYBDENUM	0.969		1	97	0.01	20	1
7440-09-7	POTASSIUM	37.1		40	93	1	20	0
7440-23-5	SODIUM	38.3		40	92	1	20	0
7440-62-2	VANADIUM	0.495		0.5	99	0.01	20	0
7440-66-6	ZINC	0.465		0.5	90	0.02	20	1

Data Package ID: *IT0909294-1*

Metals by 200.7

Method EPA200.7

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/24/2009
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009

Prep Batch: IP091102-4
QCBatchID: IP091102-4-3
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7429-90-5	ALUMINUM	0.23		0.23		0.2	1		30
7440-38-2	ARSENIC	0.01	U	0.01	U	0.01	1		30
7439-89-6	IRON	0.046	B	0.0445	B	0.1	1		30
7439-96-5	MANGANESE	0.014		0.014		0.01	1		30
7439-98-7	MOLYBDENUM	0.01	U	0.01	U	0.01	1		30
7440-62-2	VANADIUM	0.01	U	0.01	U	0.01	1		30
7440-66-6	ZINC	0.011	B	0.0102	B	0.02	1		30

Data Package ID: *IT0909294-1*

Metals by 200.7

Method EPA200.7

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-16D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/24/2009
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009

Prep Batch: IP091102-4
QCBatchID: IP091102-4-1
Run ID: IT091103-2A3
Cleanup: NONE
Basis: As Received
File Name: 091103A.

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7429-90-5	ALUMINUM	0.19	B	0.182	B	0.2	1		30
7440-38-2	ARSENIC	0.01	U	0.01	U	0.01	1		30
7440-70-2	CALCIUM	0.69	B	0.642	B	1	1		30
7439-89-6	IRON	0.0044	B	0.1	U	0.1	1		30
7439-95-4	MAGNESIUM	0.24	B	0.225	B	1	1		30
7439-96-5	MANGANESE	0.0099	B	0.00941	B	0.01	1		30
7439-98-7	MOLYBDENUM	0.01	U	0.01	U	0.01	1		30
7440-09-7	POTASSIUM	1	U	1	U	1	1		30
7440-23-5	SODIUM	1.5		1.45		1	1		30
7440-62-2	VANADIUM	0.01	U	0.01	U	0.01	1		30
7440-66-6	ZINC	0.013	B	0.0103	B	0.02	1		30

Data Package ID: *IT0909294-1*

Metals by 200.7

Method EPA200.7

Serial Dilution

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7L

Run ID: IT091103-2A3
Date Analyzed: 03-Nov-09
Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7429-90-5	ALUMINUM	0.231		0.353	B		
7440-38-2	ARSENIC	0.00380	U	0.0190	U		
7439-89-6	IRON	0.0458	B	0.0333	B		
7439-96-5	MANGANESE	0.0137		0.0139	B		1
7439-98-7	MOLYBDENUM	0.00114	U	0.00570	U		
7440-62-2	VANADIUM	0.00112	U	0.00560	U		
7440-66-6	ZINC	0.0105	B	0.0166	U		

Data Package ID: *IT0909294-1*

Metals by 200.7

Method EPA200.7

Serial Dilution

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-16L

Run ID: IT091103-2A3
Date Analyzed: 03-Nov-09
Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7429-90-5	ALUMINUM	0.189	B	0.333	B		
7440-38-2	ARSENIC	0.00380	U	0.0190	U		
7440-70-2	CALCIUM	0.692	B	0.518	B	E	25
7439-89-6	IRON	0.00442	B	0.00715	U		
7439-95-4	MAGNESIUM	0.236	B	0.143	B		
7439-96-5	MANGANESE	0.00990	B	0.00902	B		9
7439-98-7	MOLYBDENUM	0.00114	U	0.00570	U		
7440-09-7	POTASSIUM	0.102	U	0.510	U		
7440-23-5	SODIUM	1.50		1.01	B	E	33
7440-62-2	VANADIUM	0.00112	U	0.00560	U		
7440-66-6	ZINC	0.0130	B	0.0166	U		

Data Package ID: *IT0909294-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0909294

Client Name: Tetra Tech MM, Inc.

ClientProject ID: Ross Adams

Lab ID: IP091102-4MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: N/A
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
7440-36-0	ANTIMONY	10	0.3	0.3	0.082	U	
7440-39-3	BARIUM	10	1	1	0.08	U	
7440-43-9	CADMIUM	10	0.034	0.3	0.019	B	
7440-47-3	CHROMIUM	10	10	10	0.22	U	
7440-48-4	COBALT	10	1	1	0.19	U	
7440-50-8	COPPER	10	0.78	3	0.3	B	
7439-92-1	LEAD	10	0.089	0.5	0.025	B	
7440-02-0	NICKEL	10	0.71	5	0.44	B	
7782-49-2	SELENIUM	10	1	1	0.082	U	
7440-22-4	SILVER	10	0.024	0.1	0.0083	B	
7440-28-0	THALLIUM	10	0.2	0.2	0.012	U	
7440-61-1	URANIUM	10	0.0078	0.1	0.0045	B	
7440-41-7	BERYLLIUM	10	0.13	3	0.12	B	

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Laboratory Control Sample

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0909294

Client Name: Tetra Tech MM, Inc.

ClientProject ID: Ross Adams

Lab ID: IM091102-4LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009
Prep Method: EPA200.22.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: N/A
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-36-0	ANTIMONY	20	19.9	0.3		100	85 - 115%
7440-39-3	BARIUM	100	102	1		102	85 - 115%
7440-43-9	CADMIUM	20	20.1	0.3		101	85 - 115%
7440-47-3	CHROMIUM	100	101	10		101	85 - 115%
7440-48-4	COBALT	100	101	1		101	85 - 115%
7440-50-8	COPPER	100	101	3		101	85 - 115%
7439-92-1	LEAD	100	102	0.5		102	85 - 115%
7440-02-0	NICKEL	100	99.7	5		100	85 - 115%
7782-49-2	SELENIUM	40	38.2	1		95	85 - 115%
7440-22-4	SILVER	20	20.9	0.1		104	85 - 115%
7440-28-0	THALLIUM	1	0.915	0.2		92	85 - 115%
7440-61-1	URANIUM	20	20.2	0.1		101	85 - 115%
7440-41-7	BERYLLIUM	100	102	3		102	85 - 115%

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
LabID: 0909294-7MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
File Name: 03NOV09A

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-36-0	ANTIMONY	0.3	U	20.1		0.3	20	100	70 - 130%
7440-39-3	BARIUM	8.7		112		1	100	103	70 - 130%
7440-43-9	CADMIUM	0.061	B	20.3		0.3	20	101	70 - 130%
7440-47-3	CHROMIUM	10	U	100		10	100	100	70 - 130%
7440-48-4	COBALT	1	U	101		1	100	101	70 - 130%
7440-50-8	COPPER	3	U	101		3	100	101	70 - 130%
7439-92-1	LEAD	0.45	B	102		0.5	100	102	70 - 130%
7440-02-0	NICKEL	5	U	100		5	100	100	70 - 130%
7782-49-2	SELENIUM	0.11	B	39		1	40	97	70 - 130%
7440-22-4	SILVER	0.03	B	20.8		0.1	20	104	70 - 130%
7440-28-0	THALLIUM	0.014	B	0.931		0.2	1	92	70 - 130%
7440-61-1	URANIUM	8		28.2		0.1	20	101	70 - 130%
7440-41-7	BERYLLIUM	0.28	B	103		3	100	103	70 - 130%

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
LabID: 0909294-7MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
File Name: 03NOV09A

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-36-0	ANTIMONY	19.9		20	100	0.3	20	1
7440-39-3	BARIUM	111		100	102	1	20	1
7440-43-9	CADMIUM	20.2		20	101	0.3	20	0
7440-47-3	CHROMIUM	101		100	101	10	20	1
7440-48-4	COBALT	101		100	101	1	20	1
7440-50-8	COPPER	101		100	101	3	20	0
7439-92-1	LEAD	103		100	103	0.5	20	1
7440-02-0	NICKEL	101		100	101	5	20	1
7782-49-2	SELENIUM	38.1		40	95	1	20	2
7440-22-4	SILVER	20.4		20	102	0.1	20	2
7440-28-0	THALLIUM	0.938		1	92	0.2	20	1
7440-61-1	URANIUM	28.3		20	102	0.1	20	1
7440-41-7	BERYLLIUM	102		100	102	3	20	1

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
LabID: 0909294-16MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
File Name: 03NOV09A

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
7440-36-0	ANTIMONY	0.3	U	19.8		0.3	20	99	70 - 130%
7440-39-3	BARIUM	8.7		109		1	100	101	70 - 130%
7440-43-9	CADMIUM	0.073	B	19.9		0.3	20	99	70 - 130%
7440-47-3	CHROMIUM	10	U	100		10	100	100	70 - 130%
7440-48-4	COBALT	1	U	100		1	100	101	70 - 130%
7440-50-8	COPPER	0.86	B	100		3	100	99	70 - 130%
7439-92-1	LEAD	0.28	B	101		0.5	100	101	70 - 130%
7440-02-0	NICKEL	0.59	B	99.6		5	100	99	70 - 130%
7782-49-2	SELENIUM	1	U	38.7		1	40	97	70 - 130%
7440-22-4	SILVER	0.025	B	20.2		0.1	20	101	70 - 130%
7440-28-0	THALLIUM	0.2	U	0.926		0.2	1	93	70 - 130%
7440-61-1	URANIUM	3.6		23.9		0.1	20	101	70 - 130%
7440-41-7	BERYLLIUM	0.27	B	102		3	100	102	70 - 130%

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8 Revision 5.4

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
LabID: 0909294-16MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 24-Sep-09
Date Extracted: 02-Nov-09
Date Analyzed: 03-Nov-09
Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
File Name: 03NOV09A

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
7440-36-0	ANTIMONY	19.8		20	99	0.3	20	0
7440-39-3	BARIUM	110		100	102	1	20	1
7440-43-9	CADMIUM	20.2		20	101	0.3	20	2
7440-47-3	CHROMIUM	101		100	101	10	20	0
7440-48-4	COBALT	101		100	101	1	20	1
7440-50-8	COPPER	99.7		100	99	3	20	1
7439-92-1	LEAD	102		100	102	0.5	20	2
7440-02-0	NICKEL	100		100	100	5	20	1
7782-49-2	SELENIUM	38.2		40	95	1	20	1
7440-22-4	SILVER	20.3		20	101	0.1	20	1
7440-28-0	THALLIUM	0.947		1	95	0.2	20	2
7440-61-1	URANIUM	24.1		20	102	0.1	20	1
7440-41-7	BERYLLIUM	102		100	102	3	20	0

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/24/2009
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009

Prep Batch: IP091102-4
QCBatchID: IP091102-4-4
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7440-36-0	ANTIMONY	0.3	U	0.3	U	0.3	10		30
7440-39-3	BARIUM	8.7		8.59		1	10	1	30
7440-43-9	CADMIUM	0.061	B	0.0647	B	0.3	10		30
7440-47-3	CHROMIUM	10	U	10	U	10	10		30
7440-48-4	COBALT	1	U	1	U	1	10		30
7440-50-8	COPPER	3	U	3	U	3	10		30
7439-92-1	LEAD	0.45	B	0.395	B	0.5	10		30
7440-02-0	NICKEL	5	U	5	U	5	10		30
7782-49-2	SELENIUM	0.11	B	0.0995	B	1	10		30
7440-22-4	SILVER	0.03	B	0.0239	B	0.1	10		30
7440-28-0	THALLIUM	0.014	B	0.2	U	0.2	10		30
7440-61-1	URANIUM	8		8.09		0.1	10	1	30
7440-41-7	BERYLLIUM	0.28	B	0.253	B	3	10		30

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-16D

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 09/24/2009
Date Extracted: 11/02/2009
Date Analyzed: 11/03/2009

Prep Batch: IP091102-4
QCBatchID: IP091102-4-2
Run ID: IM091103-1A2
Cleanup: NONE
Basis: As Received
File Name: 03NOV09A

Sample Aliquot: 50 g
Final Volume: 50 g
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
7440-36-0	ANTIMONY	0.3	U	0.3	U	0.3	10		30
7440-39-3	BARIUM	8.7		8.13		1	10	7	30
7440-43-9	CADMIUM	0.073	B	0.0648	B	0.3	10		30
7440-47-3	CHROMIUM	10	U	10	U	10	10		30
7440-48-4	COBALT	1	U	1	U	1	10		30
7440-50-8	COPPER	0.86	B	3	U	3	10		30
7439-92-1	LEAD	0.28	B	0.0681	B	0.5	10		30
7440-02-0	NICKEL	0.59	B	5	U	5	10		30
7782-49-2	SELENIUM	1	U	1	U	1	10		30
7440-22-4	SILVER	0.025	B	0.0215	B	0.1	10		30
7440-28-0	THALLIUM	0.2	U	0.2	U	0.2	10		30
7440-61-1	URANIUM	3.6		3.6		0.1	10	0	30
7440-41-7	BERYLLIUM	0.27	B	0.259	B	3	10		30

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8

Serial Dilution

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7L

Run ID: IM091103-1A2
Date Analyzed: 03-Nov-09
Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7440-36-0	ANTIMONY	0.00000206	U	0.0000103	U		
7440-39-3	BARIUM	0.000866		0.000852	B		2
7440-41-7	BERYLLIUM	0.0000279	B	0.000140	U		
7440-43-9	CADMIUM	0.00000612	B	0.0000220	B		
7440-47-3	CHROMIUM	0.00000956	U	0.0000478	U		
7440-48-4	COBALT	0.0000137	U	0.0000685	U		
7440-50-8	COPPER	0.0000284	U	0.000142	U		
7439-92-1	LEAD	0.0000452	B	0.0000401	B		
7440-02-0	NICKEL	0.00000808	U	0.0000428	B		
7782-49-2	SELENIUM	0.0000112	B	0.000159	U		
7440-22-4	SILVER	0.00000298	B	0.0000104	B		
7440-28-0	THALLIUM	0.00000138	B	0.00000366	U		
7440-61-1	URANIUM	0.000798		0.000782			2

Data Package ID: *IM0909294-1*

Metals by 200.8

Method EPA200.8

Serial Dilution

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-16L

Run ID: IM091103-1A2
Date Analyzed: 03-Nov-09
Result Units: mg/l

CASNO	Target Analyte	Sample Result	Samp Qual	SD Result	SD Qual	EPA Qualifier	%D
7440-36-0	ANTIMONY	0.00000206	U	0.0000103	U		
7440-39-3	BARIUM	0.000868		0.000837	B		4
7440-41-7	BERYLLIUM	0.0000267	B	0.000140	U		
7440-43-9	CADMIUM	0.00000734	B	0.0000223	B		
7440-47-3	CHROMIUM	0.00000956	U	0.0000478	U		
7440-48-4	COBALT	0.0000137	U	0.0000685	U		
7440-50-8	COPPER	0.0000862	B	0.000142	U		
7439-92-1	LEAD	0.0000282	B	0.0000129	B		
7440-02-0	NICKEL	0.0000591	B	0.0000632	B		
7782-49-2	SELENIUM	0.0000318	U	0.000159	U		
7440-22-4	SILVER	0.00000252	B	0.00000954	B		
7440-28-0	THALLIUM	0.000000732	U	0.00000366	U		
7440-61-1	URANIUM	0.000361		0.000356			1

Data Package ID: *IM0909294-1*

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Lead-210

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909293

1. This report consists of the analytical results for nine water samples received by ALS on 09/28/2009.

2. These samples were prepared according to procedure SOP726R6, with procedure modifications outlined on QASS #374661.

3. These samples were analyzed for the presence of ^{210}Pb according to procedure SOP704R9. The analyses were completed on 10/23/2009.

4. The analysis results for these samples are reported in units of pCi/L. The samples were filtered and preserved prior to analysis.

5. Upon analysis of these samples, it was noted that the quench factor (SQP(E) #) was outside of the useful calibration range for this analysis. Thus, an approximate volume of 10 μL of nitro-methane was added to the samples and associated QC to bring them into the usable calibration range.

6. ICP-AES measurement of lead carrier concentrations prior to chemical separation for all samples, with the exception of sample -3, and the associated QC showed concentrations less than the amount known to have been added to the samples in the form of lead carrier. To avoid a low bias in the final analytical results the known concentration of the carrier was used in chemical yield calculations in lieu of the pre-separation measurement.

7. In the analysis of the raw data, "Window 2" is monitored for high-energy beta contamination. Sample 0909293-2 had a "Window 2" count rate slightly above the upper control limit of .788 cpm, established from calibration on 10/22/2009 through 10/23/2009 at .844 cpm. The sample had observed activity at a level below the achieved MDC. Thus, the data quality is believed to be unaffected and the results are submitted without further qualification.

8. No further anomalous situations were encountered during the preparation and analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson — 11/2/09
Jean Anderson
Radiochemistry Primary Data Reviewer — Date

11/2/09
Radiochemistry Final Data Reviewer — Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909293
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
CONF-SW-01-KC	0909293-1		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-2		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-3		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-4		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-5		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-6		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-7		WATER	22-Sep-09	15:57
300L-SW-01-E	0909293-8		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-9		WATER	23-Sep-09	10:13
CONF-SW-01-KC	0909293-10		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-11		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-12		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-13		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-14		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-15		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-16		WATER	22-Sep-09	15:57
300L-SW-01-D	0909293-17		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-18		WATER	23-Sep-09	10:13

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 1 of 8

Lab ID 0909293

Project Name/No.	Ross-Adams
REPORT TO:	Aaron Orechwa
PHONE:	970-420-9395
FAX:	970 223 7171
E-MAIL:	aaron.orechwa@tetratech.com
COMPANY:	Tetra Tech MMI
ADDRESS:	3401 Automation Way Suite 100 Ft Collins, CO 80525

Sampler(s): WB & LM

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	Alkalinity
CONF-SW-01-KC	9/21	1338	1	W	HZ SO4	1																				
CONF-SW-01-KC	9/21	1338		W	HN O3	2											X	X	X	X	10					
CONF-SW-01-KC	9/21	1338		W	—	4																X	X		X	
CONF-SW-01-C	9/21	1550	2	W	HZ SO4	1																				
CONF-SW-01-C	9/21	1550		W	HN O3	2											X	X	X	X	11					
CONF-SW-01-C	9/21	1550		W	—	4																X	X		X	
CONF-SW-01-K	9/21	1626	3	W	HZ SO4	1																				

	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
Circle: Am / Cm / Pu / Th / U											
E901.1											
SW9310 E900.0											
SW9315 E903.0											
E903.1											
SW9320 E904.0											
D5811											
E906.0											
SM7500Rn											

Circle Analytical Method Above

	SW8015B GRO DRO Other	SW8260C	SW8260C	SW8270D	SW8081A	SW8082	SW8151A	SW8330 SW8330B SW8321 by LC/MS/MS	SW8260C SW8270D SW8081A SW8151A	SW6010B SW7470A	SW6010B 7470A/7471A E200.7 E245.1	SW6010B 7470A/7471A E200.7 E245.1	SW6020A E200.8	SW6020A E200.8	SW7196A Alkaline Digestion? Y / N	SW9056 E300.0	TDS: E160.1 TSS: E160.2 Total: E160.3	SW9040B SW9045C E150.1	SW6850 by LC/MS/MS E314.0
Circle:																			

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Dissolved metals filtered in field

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 2 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WS

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

REFER TO PAGE 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY
CONF-SW-01-K	9/21	1626	(3)	W	HNO3	2											X	X	X	X	(12)					
CONF-SW-01-K	9/21	1626	↓	W	—	4																X	X			X
SPR-SW-01-A	9/22	1258	(4)	W	HZ SO4	1																				
SPR-SW-01-A	9/22	1258	↓	W	HNO3 HZ	2											X	X	X	X	(13)					
SPR-SW-01-A	9/22	1258	↓	W	—	4																X	X			X
300L-SW-01-A	9/22	1336	(5)	W	HNO3	2											X	X	X	X	(14)					
300L-SW-01-A	9/22	1336	↓	W	HZ SO4	1																				

Circle Analytical Method Above

Sample ID	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
CONF-SW-01-K											
CONF-SW-01-K										X	
SPR-SW-01-A											X
SPR-SW-01-A											
SPR-SW-01-A										X	
300L-SW-01-A											
300L-SW-01-A											X

Circle: Am / Cm / Pu / Th / U

TDS: E160.1 TSS: E160.2 Total: E160.3

Alkaline Digestion? Y / N

SW8015B GRO DRO Other; SW8260C; SW8260C; SW8270D; SW8081A; SW8082; SW8151A; SW8330 SW8330B SW8321 by LC/MS/MS; SW8260C SW8270D SW8081A SW8151A; SW6010B SW7470A; SW6010B 7470A/7471A E200.7 E245.1; SW6010B 7470A/7471A E200.7 E245.1; SW6020A E200.8; SW6020A E200.8; SW7196A; SW9056 E300.0; SW9040B SW9045C E150.1; SW6850 by LC/MS/MS E314.0; E901.1; SW9310 E900.0; SW9315 E903.0; E903.1; SW9320 E904.0; D5811; E906.0; SM7500Rn

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: REFER TO PAGE 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature: Walt Bowles	Signature: Alaska Air
Printed Name: Walt Bowles	Printed Name:
Date: 9/26/09 Time: 0733	Date: Time:
Company: Tetra Tech EC	Company:

Received By: (1)	Received By: (2)
Signature: Alaska Air	Signature: Amy Wolf
Printed Name:	Printed Name: Amy Wolf
Date: Time:	Date: 9/28/09 Time: 1750
Company:	Company: ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 3 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	Refer to page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS&TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-A	9/22	1552	5	W	HZ	4																X	X			X									X	
300L-SW-01-B	9/22	1511	6	W	H2SO4	1																														X
300L-SW-01-B	9/22	1511	|	W	HNO3	2											X	X	X	X	(15)															
300L-SW-01-B	9/22	1511	↓	W	—	4																X	X			X									X	
300L-SW-01-C	9/22	1557	7	W	HZ SO4	1																														X
300L-SW-01-C	9/22	1557	|	W	HNO3	2											X	X	X	X	(16)															
300L-SW-01-C	9/22	1557	↓	W	—	4																X	X			X									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature C Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909293

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

REPORT TO: Refer to Page 1
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,F,SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647	(8)	W	HZ SO4	1																													X
300L-SW-01-D	9/22	1647	↓	W	HN ON	2											X	X	X	X	(17)															
300L-SW-01-D	9/22	1647	↓	W	—	4																X	X			X									X	
700L-SW-01-A	9/23	1013	(9)	W	HZ SO4	1																													X	
700L-SW-01-A	9/23	1013	↓	W	HN ON	2											X	X	X	X	(18)															
700L-SW-01-A	9/23	1013	↓	W	—	4																X	X			X									X	
300L-SW-01-E	9/23	1111	(8)	W	HZ SO4	1	(8) ON WORK ORDER 0909294																													X

Circle Analytical Method Above

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra-Tech Workorder No: 0909293

Project Manager: AW Initials: CJO Date: 9/29/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3. Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5. Are the **COC and bottle labels complete and legible**?		(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7 Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) ★
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10. Is there **sufficient sample** for the requested analyses?		(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12. Are all samples within **holding times** for the requested analyses?		YES	(NO) •
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17. Were the samples **shipped on ice**?		(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.4	4.2	0.8	0.6	0.8			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	18	18	13	14	14			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ The 1gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

• Samples # 1-3 were received out of hold for TDS/TSS.
↓ #4-8 ↓ ↓ on last day of hold for TDS/TSS
Samples # 9 is ok.

If applicable, was the client contacted? (YES) NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

027 KTN 7318 4160 0909293 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !BddpvoulOvn cf s
27442321321
Dvtupn f st !E!Ovn cf s
22651

Not Negotiable
Air Waybill
Jtvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpotjhof f (t !BddpvoulOvn cf s

Bmp!opygr

Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpú f rmtX B!: 9122
VTB

SRN/1048447
HpreaTusf bl

Bhf out !JBUB!Dpef

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Bjsqpsu!pg!Ef qbsuvsf !)Bees/!pg!Gjstu!Dbssjfs!boe!Sfrvftufe!Spvjoh
Ketchikan

Up Cz!Gjstu!Dbssjfs	Up!0Cz		Up!0Cz		Dvssfodz		X U0VBM		Pvfs		Efdmsf e!Wbmvf !Gps!Dbssjbhf	Efdmsf e!Wbmvf !Gps!Dvtupn t
SEA Alaska Airlines	DEN	AS			USD	PX	X		X		NVD	NCV

Bjsqpsu!pg!Eftujobujpo	Gjhiu!Eblf	Gjhiu!Eblf	Bnpvou!pg!Jotvsbodf
Denver	AS 062/27	AS 678/27	XXX

Iboemjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Opjpg Qjfdft	Hspt t Xfjhiu	h no			Dpn n pejuz Jfn !Op/	Di bshf bcrh Xfjhiu	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)JodmfEjn fotjpot !ps!Wpmvn f *
10	654.0	L	Q			654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 23 x 14 x16 x 1 25 x 19 x15 x 1 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0							961.38	GSX PER Volume: 30.280

Prepaid	Xfjhiu!Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

UpubnfPu f sfDi bshf t !Evf !Bhf ou

UpubnfPu f sfDi bshf t !Evf !Dbssjf s
65.40

Pu f sfDi bshf t
MYC 52.32
SCC 13.08

Ti jqqf sfdf sajgf t !u bulú f !qbsjdvmbst !polu f !gpdf ti f sf pgbsf !dpsf dúboe!ú bú**insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tihobuvsf !odTi iqqf stpsi it !Bhf ou

WS Ú JT!TI JQNFOU!EPFT!OPÚ!DPOUBJO EBOHFSPVT!HPPET

Ú JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubnfQsf qbje
1,060.66

UpubnfDpmmfdu

38!Tfq!311: 21;54 Ketchikan Alaska Airlines

Fyf dvú e!Po!)Ebú * bú)Qbdf * Tjhobuvsf !pg!Jt vjoh!Dbssjf spsju !Bhf ou

027-7318 4160

0909293

Alaska Air Cargo™
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

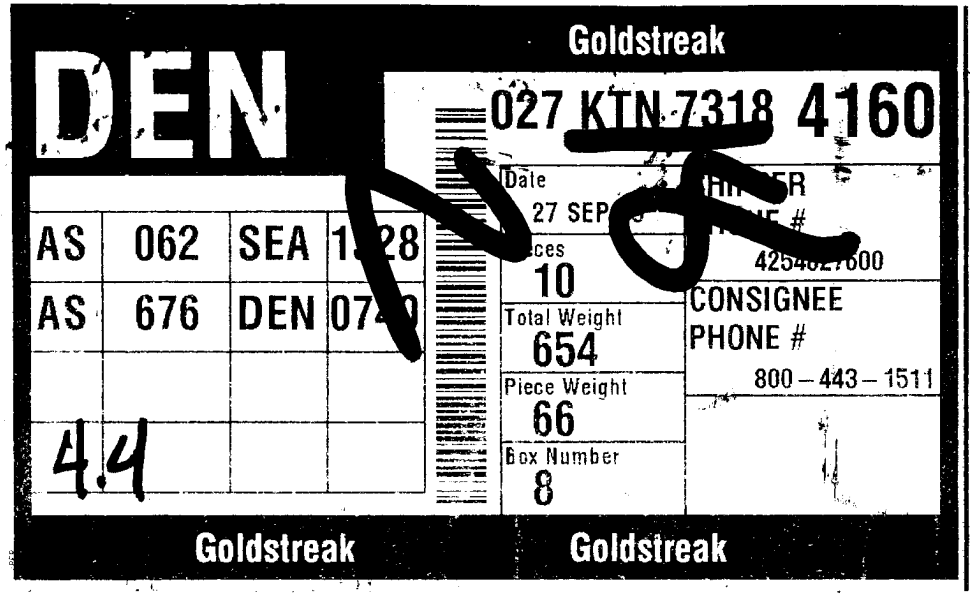
PO Number

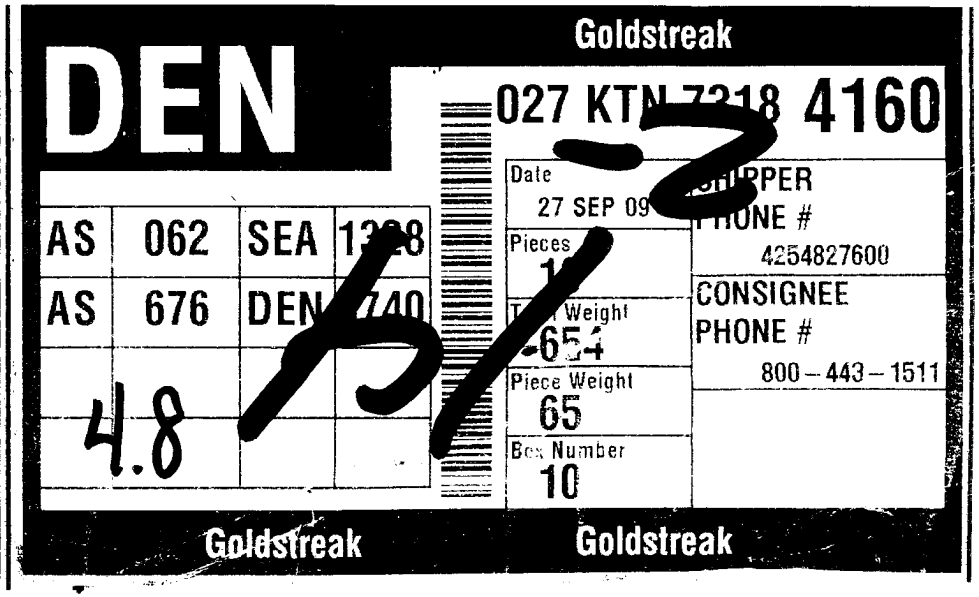
RECEIPT STATEMENT

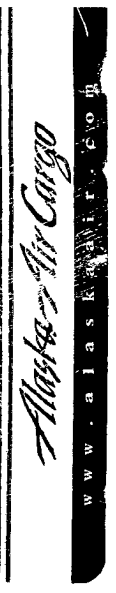
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon

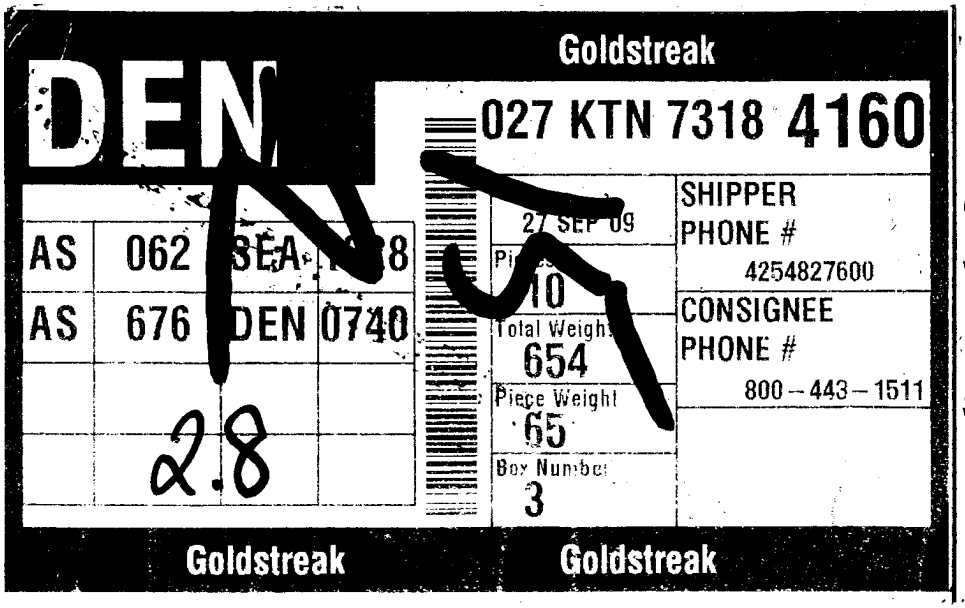
Registration:
Signature:


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.4
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
Total Weight
654
Piece Weight
65
Box Number
10
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.8
Goldstreak
Goldstreak

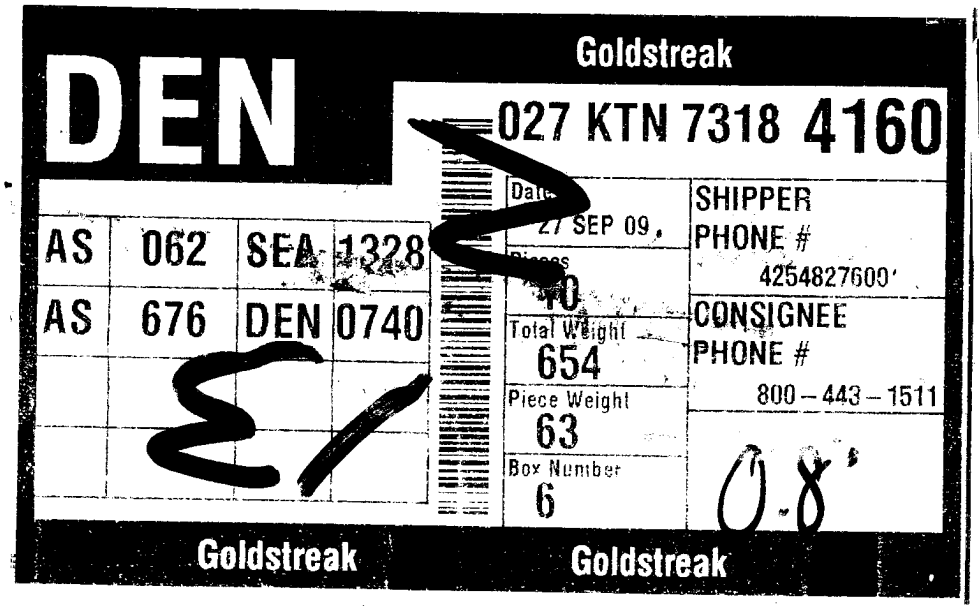

Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
2.8
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 0740
Date
27 SEP 09
Pieces
10
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.2
Goldstreak
Goldstreak


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DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
SHIPPER
PHONE #
4254827600
800 – 443 – 1511
1.4
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: PB091020-1MB

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 20-Oct-09
Date Prepared: 20-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1B
Count Time: 177.72 minutes

Final Aliquot: 833 ml
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.40 +/- 0.60	0.97	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	390.7	ug	44.7	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: PB091020-1LCS

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 20-Oct-09
Date Prepared: 20-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 29.64 minutes

Final Aliquot: 833 ml
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14255-04-0	Pb-210	20.8 +/- 5.3	1.3	20.3	102	70 - 130	P,M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	734.3	ug	84.0	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-4DUP

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 22-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Analyte	Sample Result +/- 2 s TPU	Duplicate Result +/- 2 s TPU	DER	Control Limit	Lab Qualifiers
14255-04-0	Pb-210	1.09 +/- 0.54	0.23 +/- 0.45	1.21	2.13	U

Comments: This sample was filtered prior to analysis.

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 21-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	-0.11 +/- 0.43	0.74	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	733.0	ug	83.8	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-C
Lab ID: 0909293-2

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 21-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.47 +/- 0.48	0.76	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	719.9	ug	82.3	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-K
Lab ID: 0909293-3

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 21-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.19 +/- 0.46	0.77	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	882.5	707.8	ug	80.2	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-4

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 22-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	1.09 +/- 0.54	0.74	1	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	732.0	ug	83.7	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-4DUP

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 22-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.23 +/- 0.45	0.74	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	733.7	ug	83.9	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-A
Lab ID: 0909293-5

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 22-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.36 +/- 0.42	0.68	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	797.2	ug	91.2	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-B
Lab ID: 0909293-6

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 22-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.18 +/- 0.43	0.72	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	749.8	ug	85.8	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-C
Lab ID: 0909293-7

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 22-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 22-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.30 +/- 0.44	0.72	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	752.9	ug	86.1	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 22-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	1.81 +/- 0.67	0.75	1	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	726.9	ug	83.1	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-A
Lab ID: 0909293-9

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 23-Sep-09
Date Prepared: 20-Oct-09
Date Analyzed: 23-Oct-09

Prep Batch: PB091020-1
QCBatchID: PB091020-1-1
Run ID: PB091020-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.22 +/- 0.44	0.73	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	874.5	745.7	ug	85.3	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909293-1*

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH 0909293
TEST various
METHOD Prep
SOP/REV (PREP) _____
SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

10/20/09

10/20/09

Samples 0909293-1 through -9 were received unfiltered and unpreserved. Per client instructions the samples were filtered through 0.45 µm vacuum filter and preserved to a pH below 2 with 1 mL of concentrated HNO_3. The samples were stored for 24 hours and a pH below 2 was reverified prior to sample analysis.

10/20/09

10/20/09

10/20/09

TECHNICIAN/ANALYST _____ DATE 10/20/09

DEPARTMENT MANAGER _____ DATE 10/21/09

374661

FORM 302r6.doc (4/22/04)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Lead-210

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of the analytical results for nine water samples received by ALS on 09/28/2009.

2. These samples were prepared according to procedure SOP726R6, with procedure modifications outlined in QASS #374662.

3. These samples were analyzed for the presence of ^{210}Pb according to procedure SOP704R9. The analyses were completed on 10/28/2009.

4. The analysis results for these samples are reported in units of pCi/L. The samples were filtered and preserved prior to analysis.

5. Upon analysis of these samples, it was noted that the quench factor (SQP(E) #) was outside of the useful calibration range for this analysis. Thus, an approximate volume of 10 µL of nitro-methane was added to the samples and associated QC to bring them into the usable calibration range.

6. ICP-AES measurement of lead carrier concentrations prior to chemical separation for all samples, with the exception of samples 0909294-2, -3, and -9, and the associated QC showed concentrations less than the amount known to have been added to the samples in the form of lead carrier. To avoid a low bias in the final analytical results the known concentration of the carrier was used in chemical yield calculations in lieu of the pre-separation measurement.

7. No further anomalous situations were encountered during the preparation and analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson — 11/3/09

Jean Anderson
Radiochemistry Primary Data Reviewer — Date

11/4/09

Radiochemistry Final Data Reviewer — Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01-D	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-D	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-C	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due

Disposal By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																													X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X								X	
700L-SW-01-A	9/23	1013		W	HNO3	1																													X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X								X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																													X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/23/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.

REPORT TO:

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Refer to Page 1

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
300L-SW-01-E	9/23	1111	1	W	HNO3	2											X	X	X	X	10																
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X		
900L-SW-01-A	9/23	1530	2	W	HZSO4	1																														X	
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	11																
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X		
900L-SW-02-A	9/23	1530	3	W	HZSO4	1																														X	
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	12																

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/25/09 Time 1750
Company ALS-FC

5

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,SO4	Solids TDS+TSS	pH	Perchlorate	Alkalinity
900L-SW-02-A	9/23	1530	3	W	–	4																X	X			X
900L-SW-01-B	9/23	1605	4	W	HZ SO4	1																				
900L-SW-01-B	9/23	1605	↓	W	HN O3	2											X	X	X	X	13					
900L-SW-01-B	9/23	1605	↓	W	–	4																X	X			X
900L-SW-01-C	9/23	1635	5	W	HZ SO4	1																				
900L-SW-01-C	9/23	1635	↓	W	HN O3	2											X	X	X	X	14					
900L-SW-01-C	9/23	1635	↓	W	–	4																X	X			X

Actinides	**Gamma Isotopes**	**Gross Alpha / Beta**	**Total Alpha-Emitting Radium**	**Radium 226**	**Radium 228**	**Strontium 90** (Total RadioSr)	**Tritium**	**Radon 222**	RADIOCHEM	ITC
									X	
										X
									X	
										X
									X	

Circle Analytical Method Above

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

SW8015B GRO DRO Other | SW8260C | SW8260C | SW8270D | SW8081A | SW8082 | SW8151A | SW8330 SW8330B SW8321 by LC/MS/MS | SW8260C SW8270D SW8081A SW8151A | SW6010B SW7470A | SW6010B 7470A/7471A E200.7 E245.1 | SW6010B 7470A/7471A E200.7 E245.1 | SW6020A E200.8 | SW6020A E200.8 | SW7196A Alkaline Digestion? Y / N | SW9056 E300.0 | TDS: E160.1 TSS: E160.2 Total: E160.3 | SW9040B SW9045C E150.1 | SW6850 by LC/MS/MS E314.0

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	
Signature	Walter Bowles
Printed Name	Walter Bowles
Date	9/26/09 Time 0733
Company	Tetra Tech FC

Relinquished By: (2)	
Signature	Alaska Air
Printed Name	
Date	Time
Company	

Received By: (1)	
Signature	Alaska Air
Printed Name	
Date	Time
Company	

Received By: (2)	
Signature	Amy Wolf
Printed Name	Amy Wolf
Date	9/26/09 Time 1750
Company	ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions Cl, F, SO4 SW9056 E300.0	Solids TDS, TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	Alkalinity	Actinides Circle: Am / Cm / Pu / Th / U	Gamma Isotopes E901.1	Gross Alpha / Beta SW9310 E900.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811	Tritium E906.0	Radon 222 SM7500Rn	Radioactivity	TOC
900L-SW-01-D	9/24	0948	6	W	HZ SO4	1																														X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	15															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X							X		
900L-SW-01-E	9/24	1015	7	W	HZ SO4	1																														X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	16															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X							X		
900L-SW-01-F	9/24	1040	8	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature CJ Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS+TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem	TDS
900L-SW-01-F	9/24	1040	8	W	HNO3	2											X	X	X	X	(17)															
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X									X	
700L-SW-01-B	9/24	1115	9	W	HZSO4	1																														X
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(15)															
700L-SW-01-B	9/24	1115	↓	W	-	4																X	X			X									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

∞

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	
Signature	Walter Bowles
Printed Name	Walter Bowles
Date	9/26/09 Time 0733
Company	Tetra Tech EC

Relinquished By: (2)	
Signature	Alaska Airlines
Printed Name	
Date	Time
Company	

Received By: (1)	
Signature	Alaska Airlines
Printed Name	
Date	Time
Company	

Received By: (2)	
Signature	Amy Wolf
Printed Name	Amy Wolf
Date	9/28/09 Time 1750
Company	ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WJO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opvjgz
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpui f mtX B!: 9122
VTB

SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

Bddpvou Op/

BjsqpsuJpgEf qbsuvsf !)Bees'!pgGjstuDbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up Cz!GjstuDbssjf s	Up!0Cz	Up!0Cz	Dvssf odz	X U0WBM	Pui f s	Ef dmbsf e!Wbmvf !Gps!Dbssjbhf	Ef dmbsf e!Wbmvf !Gps!Dvt upn t
SEA Alaska Airlines	DEN	AS	USD PX	X	X	NVD	NCV

BjsqpsuJpgEf t ujobujpo	Gjhi uEbuf	Gjhi uEbuf	Bn pvoupg.bt vsbodf
Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf df t	Hspt t X f jhi u	h ro	Dpn n pejuz Jtf n !Op/	Di bshf bcmf X f jhi u	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)bdnfEjn f ot jpot !ps!Wpmvn f *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 GSX PER 23 x 14 x16 x 1 25 x 19 x15 x 1 Volume: 30.280 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	

Prepaid	X f jhi u Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Pui f s Di bshf t

MYC 52.32
SCC 13.08

UpubmPui f s Di bshf t !Evf !Bhf ou

UpubmPui f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bu u f !qbsujdvmbst !po!u f !gbdf !i f sf pgbsf !dpssf du boe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB

U JT!TI JQNFOU!EPFT!OPU DPOUBJO EBOHFSPVT!HPPET

U JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
1,060.66

UpubmDpmmdu

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qbdf * Tjhobuvsf !pg.Jt vjoh!Dbssjf s!sfsjju !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

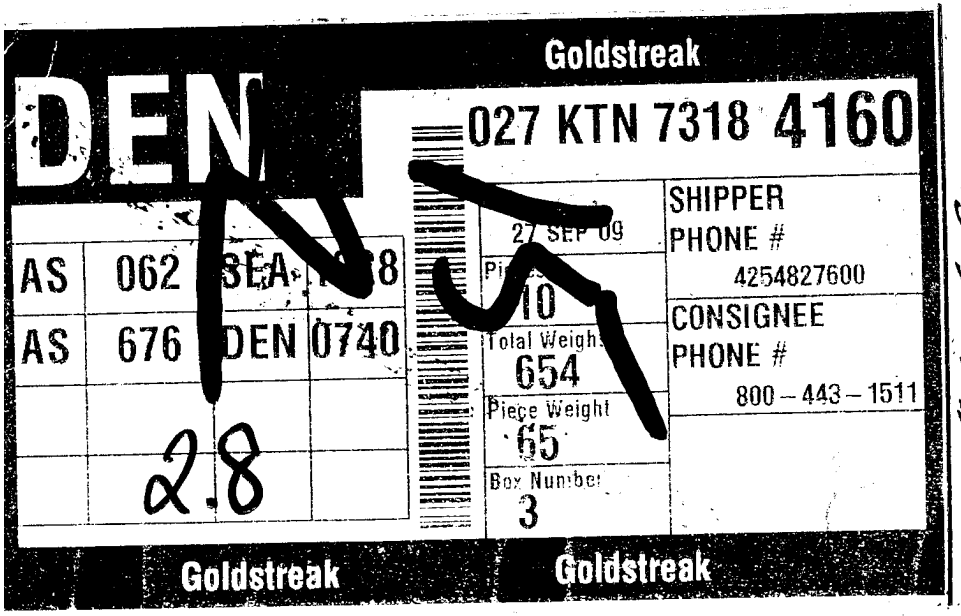
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

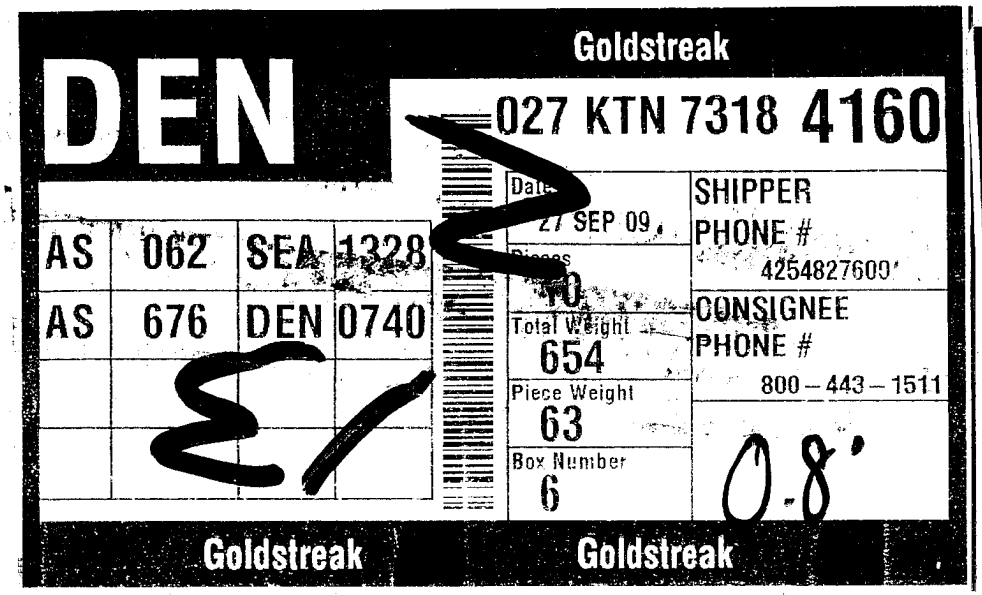

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Piece Weight
65
Box Number
10
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.2
Date
27 SEP 09
Pieces
10
Piece Weight
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
63
Box Number
6
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
58
Box Number
4
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date
27 SEP 09
Pieces
10
Box Number
1
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Piece Weight
67
Box Number
2
SHIPPER
CONSIGNEE
PHONE #
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

09092 94


DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
1.4
Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: PB091024-1MB

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 24-Oct-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes

Final Aliquot: 833 ml
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.38 +/- 0.51	0.83	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	699.7	ug	75.8	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: PB091024-1LCS

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 24-Oct-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes

Final Aliquot: 833 ml
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14255-04-0	Pb-210	20.9 +/- 5.1	0.8	20.3	103	70 - 130	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	761.8	ug	82.5	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-C
Lab ID: 0909294-5DUP

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 23-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Analyte	Sample Result +/- 2 s TPU	Duplicate Result +/- 2 s TPU	DER	Control Limit	Lab Qualifiers
14255-04-0	Pb-210	0.22 +/- 0.47	0.47 +/- 0.47	0.38	2.13	U

Comments: This sample was filtered prior to analysis.

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909294-1

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 23-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 27-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.45 +/- 0.51	0.81	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	716.7	ug	77.6	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-A
Lab ID: 0909294-2

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 23-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 27-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.44 +/- 0.51	0.82	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	928.9	714.5	ug	76.9	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-02-A
Lab ID: 0909294-3

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 23-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 27-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.38 +/- 0.47	0.76	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	927.1	768.3	ug	82.9	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-B
Lab ID: 0909294-4

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 23-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.44 +/- 0.47	0.75	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	778.0	ug	84.2	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-C
Lab ID: 0909294-5

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 23-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.22 +/- 0.47	0.77	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	756.3	ug	81.9	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID:	900L-SW-01-C
Lab ID:	0909294-5DUP

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 23-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.47 +/- 0.47	0.75	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	781.4	ug	84.6	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-D
Lab ID: 0909294-6

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 24-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.35 +/- 0.49	0.80	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	733.4	ug	79.4	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 24-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.23 +/- 0.46	0.77	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	761.1	ug	82.4	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-8

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 24-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	5.4 +/- 1.4	0.8	1	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	923.5	757.8	ug	82.1	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

Lead-210 Analysis by Liquid Scintilation

PAI 704 Rev 9

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-B
Lab ID: 0909294-9

Sample Matrix: WATER
Prep SOP: PAI 726 Rev 6
Date Collected: 24-Sep-09
Date Prepared: 24-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PB091024-1
QCBatchID: PB091024-1-1
Run ID: PB091024-1A
Count Time: 88.87 minutes
Report Basis: Filtered

Final Aliquot: 833 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14255-04-0	Pb-210	0.91 +/- 0.58	0.86	1	LT

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
LEAD	929.2	683.7	ug	73.6	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *PB0909294-1*

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH 0909294
TEST various
METHOD Prep
SOP/REV (PREP) _____
SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

S 10/20/09

S 10/20/09

Samples 0909294-1 through -9 were received unfiltered and unpreserved. Per client instructions the samples were filtered through 0.45 µm vacuum filter and preserved to a pH below 2 with 1 mL of concentrated HNO_3. The samples were stored for 24 hours and a pH below 2 was reverified prior to sample analysis.

S 10/20/09

S 10/20/09

S 10/20/09

TECHNICIAN/ANALYST _____ DATE 10/20/09

DEPARTMENT MANAGER _____ DATE 10/20/09

374662

FORM 302r6.doc (4/22/04)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Isotopic Polonium

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of the analytical results for two water samples received by ALS on 09/28/2009.

2. These samples were prepared according to procedures SOP776R11 and SOP711R7. Modifications were made to the method as described on QASS #374662 and #381004.

3. The samples were analyzed for the presence of Polonium-210 according to procedure SOP714R11. The analyses were completed on 10/28/2009.

4. The analysis results for these samples are reported in units of pCi/L. The samples were filtered and preserved prior to analysis.

5. Results of this analysis are decay-corrected to the sampling date, based on the 138.4 day half-life of Po-210. This decay correction makes no assumptions as to the equilibrium state of Po-210 with the Pb-210 parent nuclide, which has a half-life of 22.3 years.

6. ALS follows the convention outlined in ANSI N42.23 for reporting significant digits in the TPU and MDC results. ANSI N42.23 states that the TPU result should be rounded to two significant digits and that the MDC result should be rounded to the same decimal place as the TPU result. In practice, this could result in an MDC result with a reported value of 0 for samples with significant activity, including the batch laboratory control sample.

7. No further anomalous situations were encountered during the preparation or analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson
Radiochemistry Primary Data Reviewer

11/12/09
Date

Eric Finsley
Radiochemistry Final Data Reviewer

11/12/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01-D	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-D	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-C	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due

Disposal By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																													X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X								X	
700L-SW-01-A	9/23	1013		W	HNO3	1																													X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X								X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																													X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/23/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.

REPORT TO:

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Refer to Page 1

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
300L-SW-01-E	9/23	1111	1	W	HNO3	2											X	X	X	X	10																
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X		
900L-SW-01-A	9/23	1530	2	W	HZSO4	1																														X	
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	11																
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X		
900L-SW-02-A	9/23	1530	3	W	HZSO4	1																														X	
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	12																

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/25/09 Time 1750
Company ALS-FC

5

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,SO4	Solids TDS+TSS	pH	Perchlorate	Alkalinity
900L-SW-02-A	9/23	1530	3	W	–	4																X	X			X
900L-SW-01-B	9/23	1605	4	W	HZ SO4	1																				
900L-SW-01-B	9/23	1605	↓	W	HN O3	2											X	X	X	X	13					
900L-SW-01-B	9/23	1605	↓	W	–	4																X	X			X
900L-SW-01-C	9/23	1635	5	W	HZ SO4	1																				
900L-SW-01-C	9/23	1635	↓	W	HN O3	2											X	X	X	X	14					
900L-SW-01-C	9/23	1635	↓	W	–	4																X	X			X

Circle: Am / Cm / Pu / Th / U																										
E901.1																										
SW9310 E900.0																										
SW9315 E903.0																										
E903.1																										
SW9320 E904.0																										
D5811																										
E906.0																										
SM7500Rn																										

Circle Analytical Method Above

Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	ITC
									X	
										X
									X	
										X
									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Air
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/26/09 Time 1750
Company	Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions Cl, F, SO4 SW9056 E300.0	Solids TDS, TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	Alkalinity	Actinides Circle: Am / Cm / Pu / Th / U	Gamma Isotopes E901.1	Gross Alpha / Beta SW9310 E900.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811	Tritium E906.0	Radon 222 SM7500Rn	Radioactivity	TOC
900L-SW-01-D	9/24	0948	6	W	HZ SO4	1																														X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	15															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X							X		
900L-SW-01-E	9/24	1015	7	W	HZ SO4	1																														X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	16															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X							X		
900L-SW-01-F	9/24	1040	8	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature CJ Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due ____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8330B SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions(La SO4) SW9056 E300.0	Solids TDS+TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	ALKALINITY	Actinides Circle: Am / Cm / Pu / Th / U E901.1	Gamma Isotopes SW9310 E900.0	Gross Alpha / Beta SW9315 E903.0	Total Alpha-Emitting Radium E903.1	Radium 226 SW9320 E904.0	Radium 228 D5811	Strontium 90 (Total RadioSr) E906.0	Tritium SM7500Rn	Radon 222	RADIOCHEM	TDS
900L-SW-01-F	9/24	1040	(8)	W	HNO3	2											X	X	X	X	(17)														
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X								X	
700L-SW-01-B	9/24	1115	(9)	W	HZSO4	1																													X
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(19)														
700L-SW-01-B	9/24	1115	↓	W	-	4																X	X			X								X	

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Airlines
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Airlines
Printed Name
Date Time
Company

Received By: (2)
Signature Cwolf
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WJO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opvjgz
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpui f mtX B!: 9122
VTB

SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

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BjsqpsuJpgEf qbsuvsf !)Bees'!pgGjstuDbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up Cz!GjstuDbssjf s	Up!0Cz	Up!0Cz	Dvssf odz	X U0WBM	Pui f s	Ef dmbsf e!Wbmvf !Gps!Dbssjbhf	Ef dmbsf e!Wbmvf !Gps!Dvt upn t
SEA Alaska Airlines	DEN	AS	USD PX	X	X	NVD	NCV

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Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf df t	Hspt t X f jhi u	h ro	Dpn n pejuz Jtf n !Op/	Di bshf bcmf X f jhi u	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)bdnfEjn f ot jpot !ps!Wpmvn f *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 GSX PER 23 x 14 x16 x 1 25 x 19 x15 x 1 Volume: 30.280 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	

Prepaid	X f jhi u Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Pui f s Di bshf t

MYC 52.32
SCC 13.08

UpubmPui f s Di bshf t !Evf !Bhf ou

UpubmPui f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bu u f !qbsujdvmbst !po!u f !gbdf !i f sf pgbsf !dpssf du boe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB

U JT!TI JQNFOU!EPFT!OPU DPOUBJO EBOHFSPVT!HPPET

U JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
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38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qbdf * Tjhobuvsf !pg.Jt vjoh!Dbssjf s!sfsjju !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

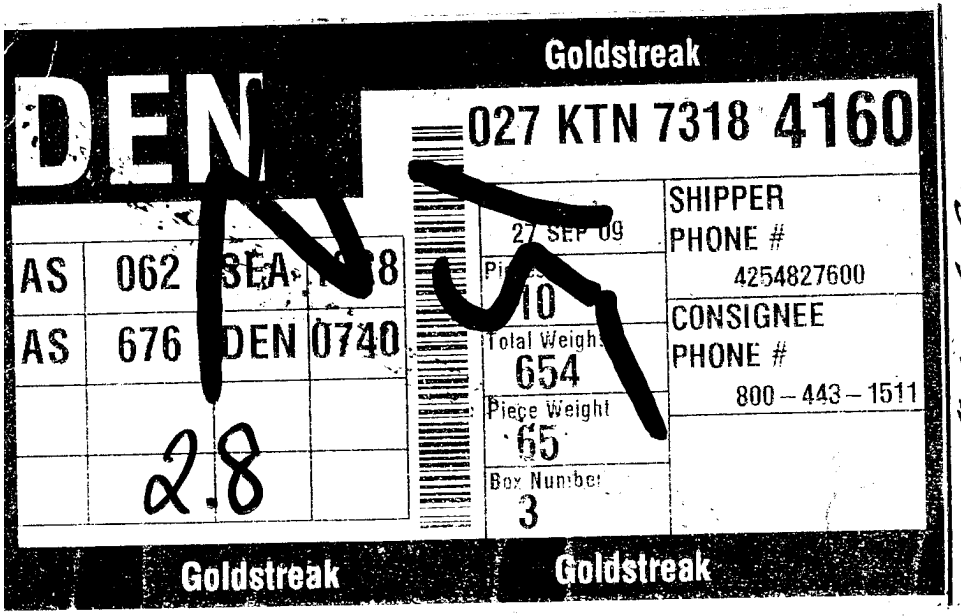
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

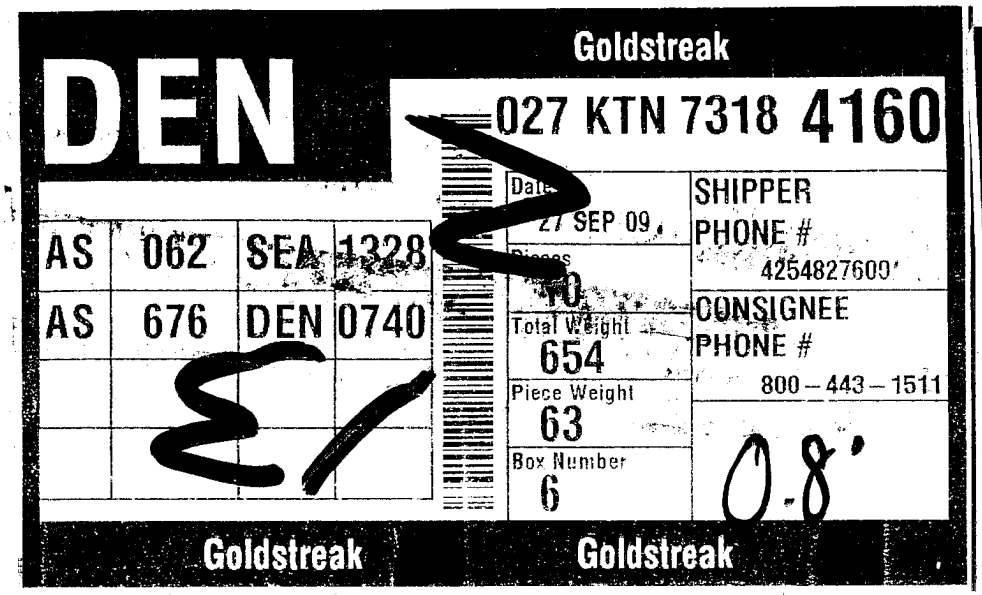

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Piece Weight
65
Box Number
10
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.2
Date
27 SEP 09
Pieces
10
Piece Weight
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.8
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.6
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
Box Numb 1
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
1.2
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
800-443-1511
2.2
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

09092 94


DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
1.4
Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Polonium-210 by Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: PL091022-1MB

Sample Matrix: WATER
Prep SOP: PAI 711 Rev 7
Date Collected: 22-Oct-09
Date Prepared: 22-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PL091022-1
QCBatchID: PL091022-1-1
Run ID: PL091022-1B
Count Time: 360 minutes

Final Aliquot: 250 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-52-7	Po-210	0.006 +/- 0.080	0.145	0.5	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Po-209	24.06	18.9	pCi/l	78.5	20 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *PL0909294-1*

Polonium-210 by Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: PL091022-1LCS

Sample Matrix: WATER
Prep SOP: PAI 711 Rev 7
Date Collected: 22-Oct-09
Date Prepared: 22-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PL091022-1
QCBatchID: PL091022-1-1
Run ID: PL091022-1B
Count Time: 360 minutes

Final Aliquot: 250 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13981-52-7	Po-210	43.1 +/- 6.9	0.2	40.7	106	83 - 117	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Po-209	24.06	16.3	pCi/l	67.8	20 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *PL0909294-1*

Polonium-210 by Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7DUP

Sample Matrix: WATER
Prep SOP: PAI 711 Rev 7
Date Collected: 24-Sep-09
Date Prepared: 22-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PL091022-1
QCBatchID: PL091022-1-1
Run ID: PL091022-1B
Count Time: 360 minutes
Report Basis: Filtered

Final Aliquot: 250 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Analyte	Sample			Duplicate			DER	Control Limit
		Result +/- 2 s TPU	MDC	Qualifiers	Result +/- 2 s TPU	MDC	Qualifiers		
13981-52-7	Po-210	0.04 +/- 0.12	0.27	U	-0.02 +/- 0.15	0.33	U	0.30	2.13

Comments: This sample was filtered prior to analysis.

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *PL0909294-1*

Polonium-210 by Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7

Sample Matrix: WATER
Prep SOP: PAI 711 Rev 7
Date Collected: 24-Sep-09
Date Prepared: 22-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PL091022-1
QCBatchID: PL091022-1-1
Run ID: PL091022-1B
Count Time: 360 minutes
Report Basis: Filtered

Final Aliquot: 250 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-52-7	Po-210	0.04 +/- 0.12	0.27	0.5	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Po-209	24.06	17.2	pCi/l	71.7	20 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *PL0909294-1*

Polonium-210 by Alpha Spectroscopy

PAI 714 Rev 11

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID:	900L-SW-01-E
Lab ID:	0909294-7DUP

Sample Matrix: WATER
Prep SOP: PAI 711 Rev 7
Date Collected: 24-Sep-09
Date Prepared: 22-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PL091022-1
QCBatchID: PL091022-1-1
Run ID: PL091022-1B
Count Time: 360 minutes
Report Basis: Filtered

Final Aliquot: 250 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-52-7	Po-210	-0.02 +/- 0.15	0.33	0.5	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Po-209	24.06	11.5	pCi/l	47.7	20 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *PL0909294-1*

Polonium-210 by Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-8

Sample Matrix: WATER
Prep SOP: PAI 711 Rev 7
Date Collected: 24-Sep-09
Date Prepared: 22-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: PL091022-1
QCBatchID: PL091022-1-1
Run ID: PL091022-1B
Count Time: 360 minutes
Report Basis: Filtered

Final Aliquot: 250 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13981-52-7	Po-210	1.31 +/- 0.42	0.14	0.5	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Po-209	24.06	17.0	pCi/l	70.7	20 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *PL0909294-1*

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH 0909294
TEST various
METHOD Prep
SOP/REV (PREP)
SOP/REV (ANAL)

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

10/20/09

10/20/09

Samples 0909294-1 through -9 were received unfiltered and unpreserved. Per client instructions the samples were filtered through 0.45 µm vacuum filter and preserved to a pH below 2 with 1 mL of concentrated HNO_3. The samples were stored for 24 hours and a pH below 2 was reverified prior to sample analysis.

10/20/09

10/20/09

10/20/09

TECHNICIAN/ANALYST _____ DATE 10/20/09

DEPARTMENT MANAGER _____ DATE 10/20/09

374662

FORM 302r6.doc (4/22/04)

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH All Po's
TEST $Po-210$
METHOD Prep
SOP/REV (PREP) 7-11
SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

CES 8/11/09

CES 8/11/09

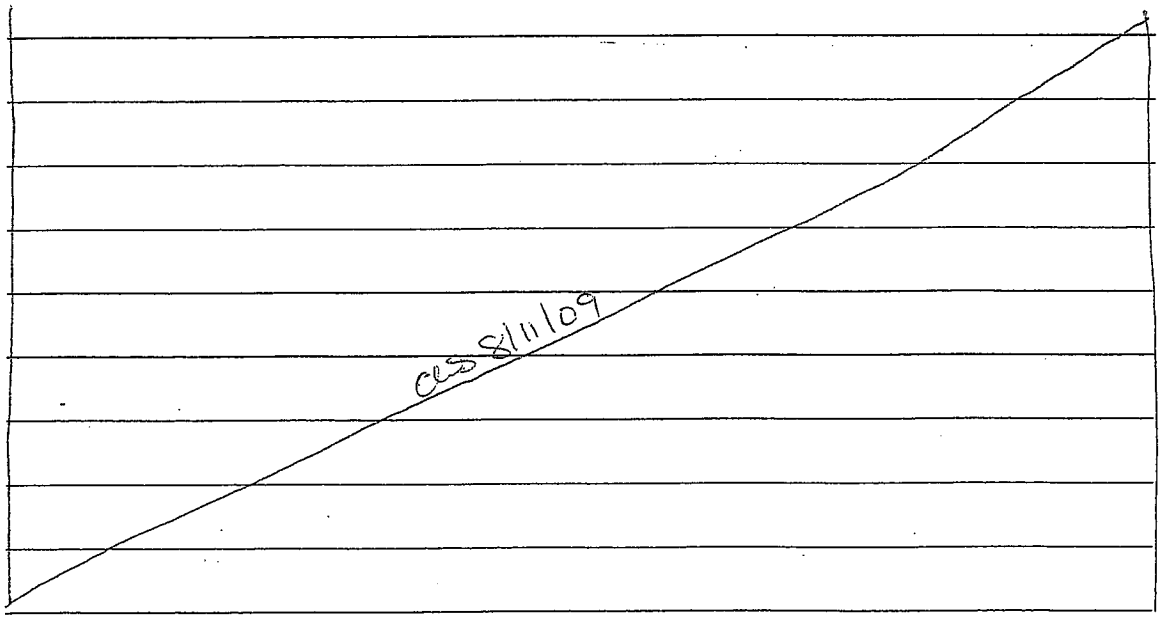
Silver disks are used in lieu of the nickel disks (as stated in SOP 711/7), as it is believed that they can improve both spectral quality and chemical yield for Po samples.

CES 8/11/09

Unlike the nickel disks, the silver disks are not immersed in acid for cleaning prior to electroplating. Instead, the silver disks are cleaned by only immersing them in concentrated Radiac Wash for ~10 seconds and then rinsing them with deionized water.

CES 8/11/09

CES 8/11/09



TECHNICIAN/ANALYST Crystal Sheaffer DATE 8/11/09

DEPARTMENT MANAGER J Ellis DATE 8/11/09

381004

FORM 302r6b.doc (4/22/04)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Radium-226 by EPA Method 903.1(m)

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909293

1. This report consists of the analytical results for nine water samples received by ALS on 09/28/09.

2. These samples were prepared and analyzed according to procedure SOP783R8, with procedure modifications outlined on QASS 374661. The analyses were completed on 11/02/09.

3. The analysis results for these samples are reported in units of pCi/L. The samples were filtered and preserved prior to analysis.

4. The ICP-AES measurement of barium concentrations prior to chemical separation for all the samples and QC samples showed concentrations less than zero. To avoid a low bias in the final analytical results, the initial barium concentration was taken to be zero.

5. ALS follows the convention outlined in ANSI N42.23 for reporting significant digits in the TPU and MDC results. ANSI N42.23 states that the TPU result should be rounded to two significant digits and that the MDC result should be rounded to the same decimal place as the TPU result. In practice, this could result in an MDC result with a reported value of 0 for samples with significant activity, including the batch laboratory control sample.

6. During the initial count of these samples, several samples and the method blank did not meet the requested MDC of 0.4 pCi/L. The affected samples were allowed to re-in-grow and were counted again with an extended count time. The requested MDC was not achieved. Per project manager's instruction, results of the initial count are reported without further qualification. These samples and the method blank are identified with an "M" qualifier on the final reports. Please refer to QASS 374680.

7. No further anomalous situations were encountered during the preparation or analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend — 11/12/09
Radiochemistry Primary Data Reviewer — Date

Radiochemistry Final Data Reviewer — 11/12/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909293
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
CONF-SW-01-KC	0909293-1		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-2		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-3		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-4		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-5		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-6		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-7		WATER	22-Sep-09	15:57
300L-SW-01-E	0909293-8		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-9		WATER	23-Sep-09	10:13
CONF-SW-01-KC	0909293-10		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-11		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-12		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-13		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-14		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-15		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-16		WATER	22-Sep-09	15:57
300L-SW-01-D	0909293-17		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-18		WATER	23-Sep-09	10:13

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 1 of 8

Lab ID 0909293

Project Name/No.	Ross-Adams
REPORT TO:	Aaron Orechwa
PHONE:	970-420-9395
FAX:	970 223 7171
E-MAIL:	aaron.orechwa@tetratech.com
COMPANY:	Tetra Tech MMI
ADDRESS:	3401 Automation Way Suite 100 Ft Collins, CO 80525

Sampler(s): WB & LM

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	Alkalinity
CONF-SW-01-KC	9/21	1338	1	W	HZ SO4	1																				
CONF-SW-01-KC	9/21	1338		W	HN O3	2											X	X	X	X	10					
CONF-SW-01-KC	9/21	1338		W	—	4																X	X		X	
CONF-SW-01-C	9/21	1550	2	W	HZ SO4	1																				
CONF-SW-01-C	9/21	1550		W	HN O3	2											X	X	X	X	11					
CONF-SW-01-C	9/21	1550		W	—	4																X	X		X	
CONF-SW-01-K	9/21	1626	3	W	HZ SO4	1																				

	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
Circle: Am / Cm / Pu / Th / U											
E901.1											
SW9310 E900.0											
SW9315 E903.0											
E903.1											
SW9320 E904.0											
D5811											
E906.0											
SM7500Rn											

Circle Analytical Method Above

	SW8015B GRO DRO Other	SW8260C	SW8260C	SW8270D	SW8081A	SW8082	SW8151A	SW8330 SW8330B SW8321 by LC/MS/MS	SW8260C SW8270D SW8081A SW8151A	SW6010B SW7470A	SW6010B 7470A/7471A E200.7 E245.1	SW6010B 7470A/7471A E200.7 E245.1	SW6020A E200.8	SW6020A E200.8	SW7196A Alkaline Digestion? Y / N	SW9056 E300.0	TDS: E160.1 TSS: E160.2 Total: E160.3	SW9040B SW9045C E150.1	SW6850 by LC/MS/MS E314.0
Circle:																			

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Dissolved metals filtered in field

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 2 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WS

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

REFER TO PAGE 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY
CONF-SW-01-K	9/21	1626	(3)	W	HNO3	2											X	X	X	X	(12)					
CONF-SW-01-K	9/21	1626	↓	W	—	4																X	X			X
SPR-SW-01-A	9/22	1258	(4)	W	HZ SO4	1																				
SPR-SW-01-A	9/22	1258	↓	W	HNO3 HZ	2											X	X	X	X	(13)					
SPR-SW-01-A	9/22	1258	↓	W	—	4																X	X			X
300L-SW-01-A	9/22	1336	(5)	W	HNO3	2											X	X	X	X	(14)					
300L-SW-01-A	9/22	1336	↓	W	HZ SO4	1																				

Circle Analytical Method Above

Sample ID	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
CONF-SW-01-K											
CONF-SW-01-K										X	
SPR-SW-01-A											X
SPR-SW-01-A											
SPR-SW-01-A										X	
300L-SW-01-A											
300L-SW-01-A											X

Circle: Am / Cm / Pu / Th / U

TDS: E160.1 TSS: E160.2 Total: E160.3

Alkaline Digestion? Y / N

SW8015B GRO DRO Other; SW8260C; SW8260C; SW8270D; SW8081A; SW8082; SW8151A; SW8330 SW8330B SW8321 by LC/MS/MS; SW8260C SW8270D SW8081A SW8151A; SW6010B SW7470A; SW6010B 7470A/7471A E200.7 E245.1; SW6010B 7470A/7471A E200.7 E245.1; SW6020A E200.8; SW6020A E200.8; SW7196A; SW9056 E300.0; SW9040B SW9045C E150.1; SW6850 by LC/MS/MS E314.0; E901.1; SW9310 E900.0; SW9315 E903.0; E903.1; SW9320 E904.0; D5811; E906.0; SM7500Rn

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: REFER TO PAGE 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature: Walt Bowles	Signature: Alaska Air
Printed Name: Walt Bowles	Printed Name:
Date: 9/26/09 Time: 0733	Date: Time:
Company: Tetra Tech EC	Company:

Received By: (1)	Received By: (2)
Signature: Alaska Air	Signature: Amy Wolf
Printed Name:	Printed Name: Amy Wolf
Date: Time:	Date: 9/28/09 Time: 1750
Company:	Company: ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 3 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	Refer to page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS&TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-A	9/22	1552	5	W	HZ	4																X	X			X									X	
300L-SW-01-B	9/22	1511	6	W	H2SO4	1																														X
300L-SW-01-B	9/22	1511	|	W	HNO3	2											X	X	X	X	(15)															
300L-SW-01-B	9/22	1511	↓	W	—	4																X	X			X									X	
300L-SW-01-C	9/22	1557	7	W	HZ SO4	1																														X
300L-SW-01-C	9/22	1557	|	W	HNO3	2											X	X	X	X	(16)															
300L-SW-01-C	9/22	1557	↓	W	—	4																X	X			X									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature C Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909293

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

REPORT TO: Refer to Page 1
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,F,SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647	(8)	W	HZ SO4	1																													X
300L-SW-01-D	9/22	1647	↓	W	HN ON	2											X	X	X	X	(17)															
300L-SW-01-D	9/22	1647	↓	W	—	4																X	X			X									X	
700L-SW-01-A	9/23	1013	(9)	W	HZ SO4	1																													X	
700L-SW-01-A	9/23	1013	↓	W	HN ON	2											X	X	X	X	(18)															
700L-SW-01-A	9/23	1013	↓	W	—	4																X	X			X									X	
300L-SW-01-E	9/23	1111	(8)	W	HZ SO4	1	(8) ON WORK ORDER 0909294																													X

Circle Analytical Method Above

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra-Tech Workorder No: 0909293

Project Manager: AW Initials: CJO Date: 9/29/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3. Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5. Are the **COC and bottle labels complete and legible**?		(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7 Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) ★
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10. Is there **sufficient sample** for the requested analyses?		(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12. Are all samples within **holding times** for the requested analyses?		YES	(NO) •
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17. Were the samples **shipped on ice**?		(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.4	4.2	0.8	0.6	0.8			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	18	18	13	14	14			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ The 1gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

• Samples # 1-3 were received out of hold for TDS/TSS.
↓ #4-8 ↓ ↓ on last day of hold for TDS/TSS
Samples # 9 is ok.

If applicable, was the client contacted? (YES) NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

027 KTN 7318 4160 0909293 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !BddpvoulOvn cf s
27442321321
Dvtupn f st !E!Ovn cf s
22651

Not Negotiable
Air Waybill
Jtvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpotjhof f (t !BddpvoulOvn cf s

Bmp!opygr

Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpú f rmtX B!: 9122
VTB

SRN/1048447
HpreaTusf bl

Bhf out !JBUB!Dpef

BddpvoulOp/

Bjsqpsu!pg!Ef qbsuvsf !)Bees/!pg!Gjstu!Dbssjfs!boe!Sfrvftufe!Spvjoh
Ketchikan

Up Cz!Gjstu!Dbssjfs	Up!0Cz		Up!0Cz		Dvssfodz		X U0VBM		Pvfs		Efdmsf e!Wbmvf !Gps!Dbssjbhf	Efdmsf e!Wbmvf !Gps!Dvtupn t
SEA Alaska Airlines	DEN	AS			USD	PX	X		X		NVD	NCV

Bjsqpsu!pg!Eftujobujpo	Gjhiu!Eblf	Gjhiu!Eblf	Bnpvou!pg!Jotvsbodf
Denver	AS 062/27	AS 678/27	XXX

Iboemjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Opjpg Qjfdft	Hspt t Xfjhiu	h no			Dpn n pejuz Jfn !Op/	Di bshf bcrh Xfjhiu	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)JodmfEjn fotjpot !ps!Wpmvn f *
10	654.0	L	Q			654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 23 x 14 x16 x 1 25 x 19 x15 x 1 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0							961.38	GSX PER Volume: 30.280

Prepaid	Xfjhiu!Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

UpubnfPu f sfDi bshf t !Evf !Bhf ou

UpubnfPu f sfDi bshf t !Evf !Dbssjf s
65.40

Pu f sfDi bshf t
MYC 52.32
SCC 13.08

Ti jqqf sfdf sajgf t !u bulú f !qbsjdvmbst !polu f !gpdf ti f sf pgbsf !dpsf dúboe!ú bú**insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tihobuvsf !odTi iqqf stpsi it !Bhf ou

WS Ú JT!TI JQNFOU!EPFT!OPÚ!DPOUBJO EBOHFSPVT!HPPET

Ú JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubnfQsf qbje
1,060.66

UpubnfDpmmfdu

38!Tfq!311: 21;54 Ketchikan Alaska Airlines

Fyf dvú e!Po!)Ebú * bú)Qbdf * Tjhobuvsf !pg!Jt vjoh!Dbssjf spsju !Bhf ou

027-7318 4160

0909293

Alaska Air Cargo™
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

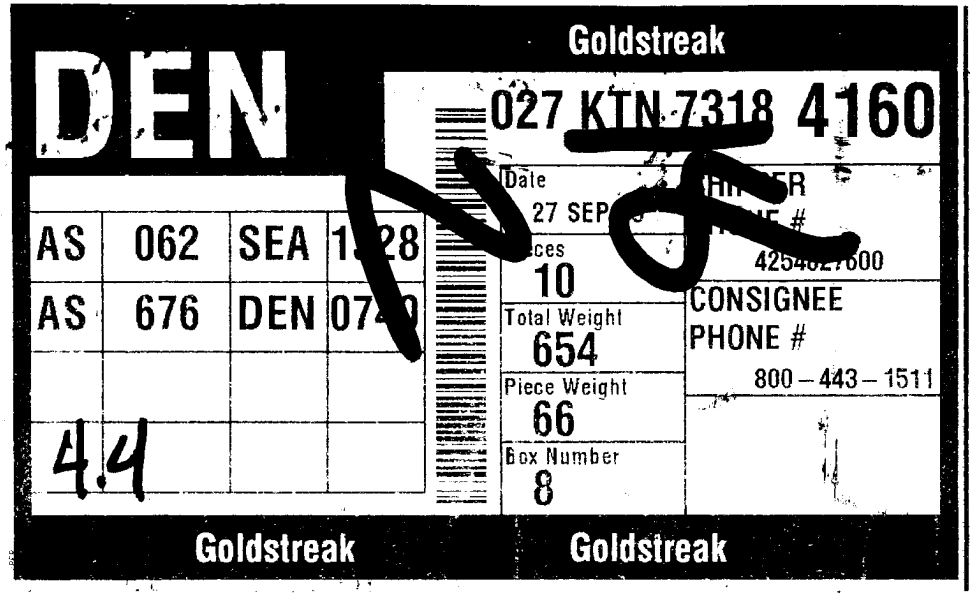
PO Number

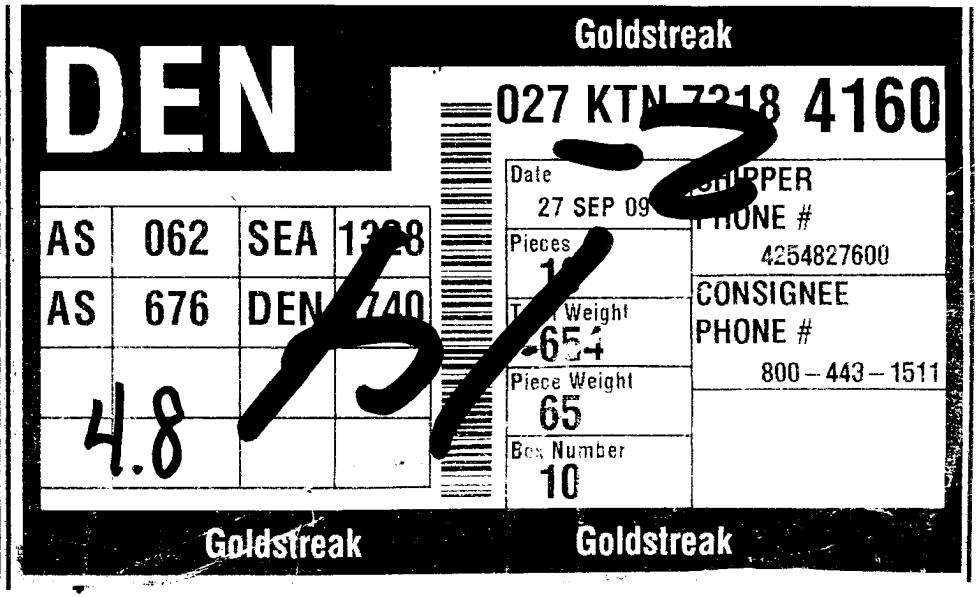
RECEIPT STATEMENT

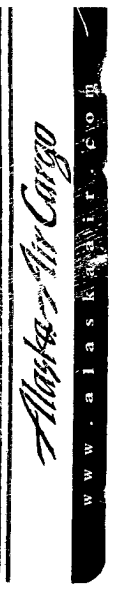
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon

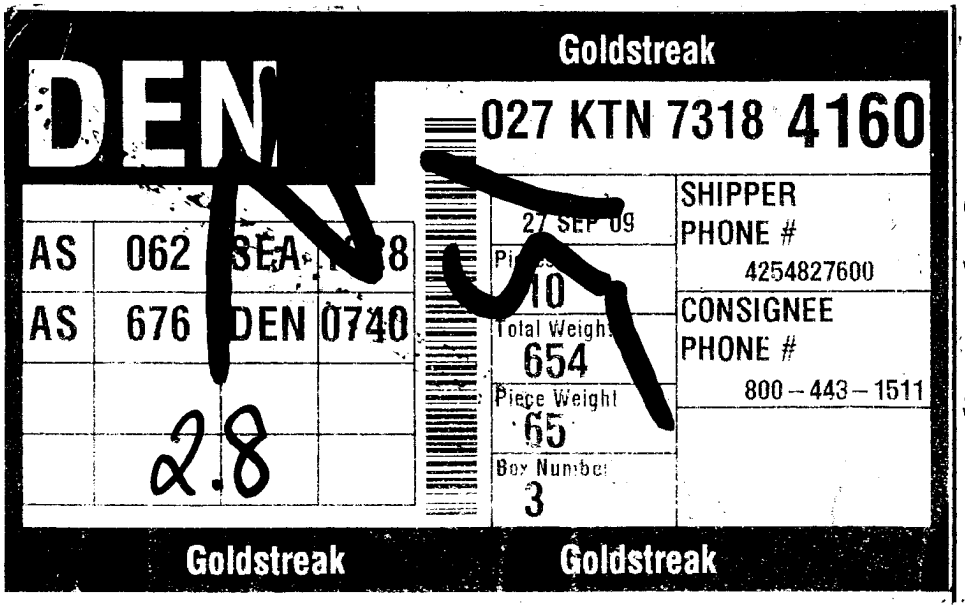
Registration:
Signature:


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.4
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
Total Weight
654
Piece Weight
65
Box Number
10
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.8
Goldstreak
Goldstreak

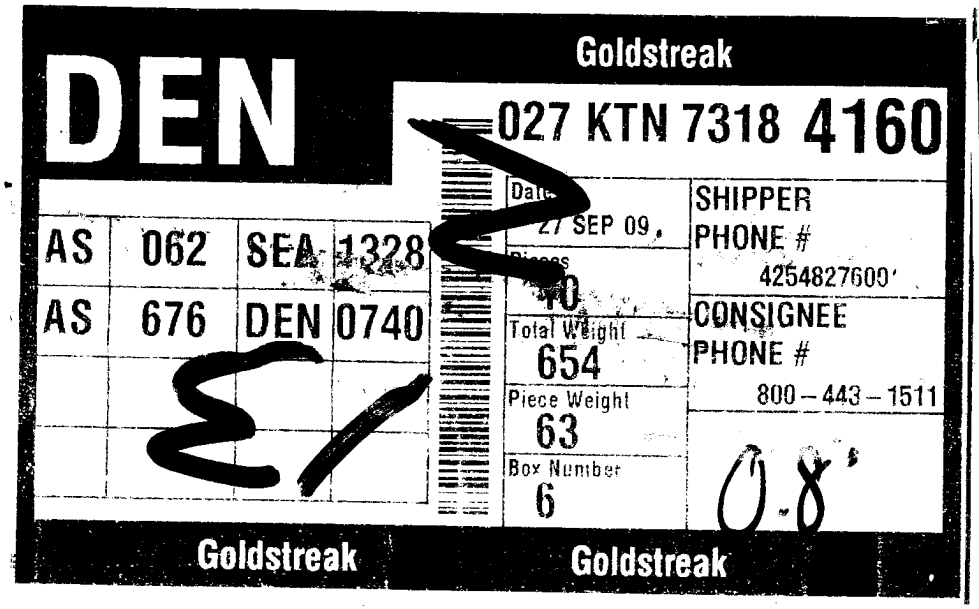

Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
2.8
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 0740
Date
27 SEP 09
Pieces
10
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.2
Goldstreak
Goldstreak


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DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
SHIPPER
PHONE #
4254827600
800 – 443 – 1511
1.4
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RE091021-1MB

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes

Final Aliquot: 995 ml
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.03 +/- 0.26	0.49	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13840	ug	83.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RE091021-1LCS

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes

Final Aliquot: 995 ml
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	48 +/- 12	0	45.1	106	67 - 120	P,M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13310	ug	80.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1DUP

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Analyte	Sample			Duplicate			DER	Control Limit
		Result +/- 2 s TPU	MDC	Qualifiers	Result +/- 2 s TPU	MDC	Qualifiers		
13982-63-3	Ra-226	0.33 +/- 0.31	0.46	U,M	0 +/- 0.23	0.46	U,M	0.85	2.13

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.33 +/- 0.31	0.46	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13830	ug	83.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1DUP

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0 +/- 0.23	0.46	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13810	ug	83.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-C
Lab ID: 0909293-2

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.15 +/- 0.30	0.52	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13520	ug	81.3	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-K
Lab ID: 0909293-3

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.05 +/- 0.31	0.62	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	11830	ug	71.1	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-4

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.23 +/- 0.25	0.34	0.4	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	12300	ug	74.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-A
Lab ID: 0909293-5

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.22 +/- 0.35	0.59	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13360	ug	80.3	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-B
Lab ID: 0909293-6

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.02 +/- 0.17	0.34	0.4	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13670	ug	82.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-C
Lab ID: 0909293-7

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.18 +/- 0.29	0.48	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	12760	ug	76.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	4.3 +/- 1.4	0.3	0.4	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13470	ug	81.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-A
Lab ID: 0909293-9

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 30-Oct-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0 +/- 0.26	0.40	0.4	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	11000	ug	66.1	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909293-1*

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH 0909293
TEST various
METHOD Prep
SOP/REV (PREP) _____
SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

10/20/09

10/20/09

Samples 0909293-1 through -9 were received unfiltered and unpreserved. Per client instructions the samples were filtered through 0.45 µm vacuum filter and preserved to a pH below 2 with 1 mL of concentrated HNO_3. The samples were stored for 24 hours and a pH below 2 was reverified prior to sample analysis.

10/20/09

10/20/09

10/20/09

TECHNICIAN/ANALYST _____ DATE 10/20/09

DEPARTMENT MANAGER _____ DATE 10/21/09

374661

FORM 302r6.doc (4/22/04)

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH BE091021-1
TEST Ra226 Rn Em
METHOD 903.1
SOP/REV (PREP) 783 r8
SOP/REV (ANAL) 783 r8

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

PSW 11/10/09

Not all samples in work orders 0909293 and 0909294 achieved the requested MDC during the initial count. The affected samples were allowed to re-ingrow and counted again with an extended count time. Again the requested MDC was not achieved. Per client instructions, these samples are reported using the first count data, which had lower MDC values overall. All samples failing to meet the requested MDC are flagged with an 'M' qualifier on the final reports. PSW 11/10/09

PSW 11/10/09 PSW 11/10/09 PSW 11/10/09

TECHNICIAN/ANALYST Peter Hawkins DATE 11/10/09

DEPARTMENT MANAGER Jeff Kray DATE 11/10/09

374680

FORM 302r6.doc (4/22/04)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Radium-226 by EPA Method 903.1(m)

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of the analytical results for nine water samples received by ALS on 09/28/09.

2. These samples were prepared and analyzed according to procedure SOP783R8, with procedure modifications outlined on QASS 374662. The analyses were completed on 11/02/09.

3. The analysis results for these samples are reported in units of pCi/L. The samples were filtered and preserved prior to analysis.

4. The ICP-AES measurement of barium concentrations prior to chemical separation for all the samples and QC samples, except for sample 0909294-8 showed concentrations less than zero. To avoid a low bias in the final analytical results, the initial barium concentration was taken to be zero.

5. ALS follows the convention outlined in ANSI N42.23 for reporting significant digits in the TPU and MDC results. ANSI N42.23 states that the TPU result should be rounded to two significant digits and that the MDC result should be rounded to the same decimal place as the TPU result. In practice, this could result in an MDC result with a reported value of 0 for samples with significant activity, including the batch laboratory control sample.

6. During the initial count of these samples, several samples and the method blank did not meet the requested MDC of 0.4 pCi/L. The affected samples were allowed to re-in-grow and were counted again with an extended count time. The requested MDC was not achieved. Per client's request, results of the initial count are reported without further qualification. These samples and the method blank are identified with an "M" or "M3" qualifier on the final reports. Samples with an "M3" qualifier have activity above the achieved detection limit. Please refer to QASS 374680.

7. No further anomalous situations were encountered during the preparation or analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend — 11/12/09
Radiochemistry Primary Data Reviewer — Date

Radiochemistry Final Data Reviewer — 11/12/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01-D	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-D	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-C	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due

Disposal By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																													X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X								X	
700L-SW-01-A	9/23	1013		W	HNO3	1																													X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X								X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																													X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/23/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.

REPORT TO:

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Refer to Page 1

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
300L-SW-01-E	9/23	1111	1	W	HNO3	2											X	X	X	X	10																
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X		
900L-SW-01-A	9/23	1530	2	W	HZSO4	1																														X	
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	11																
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X		
900L-SW-02-A	9/23	1530	3	W	HZSO4	1																														X	
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	12																

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/25/09 Time 1750
Company ALS-FC

5

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,SO4	Solids TDS+TSS	pH	Perchlorate	Alkalinity
900L-SW-02-A	9/23	1530	3	W	–	4																X	X			X
900L-SW-01-B	9/23	1605	4	W	HZ SO4	1																				
900L-SW-01-B	9/23	1605	↓	W	HN O3	2											X	X	X	X	13					
900L-SW-01-B	9/23	1605	↓	W	–	4																X	X			X
900L-SW-01-C	9/23	1635	5	W	HZ SO4	1																				
900L-SW-01-C	9/23	1635	↓	W	HN O3	2											X	X	X	X	14					
900L-SW-01-C	9/23	1635	↓	W	–	4																X	X			X

Circle: Am / Cm / Pu / Th / U																										
E901.1																										
SW9310 E900.0																										
SW9315 E903.0																										
E903.1																										
SW9320 E904.0																										
D5811																										
E906.0																										
SM7500Rn																										

Circle Analytical Method Above

Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	ITC
									X	
										X
									X	
										X
									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Air
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/26/09 Time 1750
Company	Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions Cl, F, SO4 SW9056 E300.0	Solids TDS, TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	Alkalinity	Actinides Circle: Am / Cm / Pu / Th / U	Gamma Isotopes E901.1	Gross Alpha / Beta SW9310 E900.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811	Tritium E906.0	Radon 222 SM7500Rn	Radioactivity	TOC
900L-SW-01-D	9/24	0948	6	W	HZ SO4	1																														X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	15															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X							X		
900L-SW-01-E	9/24	1015	7	W	HZ SO4	1																														X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	16															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X							X		
900L-SW-01-F	9/24	1040	8	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature CJ Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS+TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem	TDS
900L-SW-01-F	9/24	1040	8	W	HNO3	2											X	X	X	X	(17)															
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X									X	
700L-SW-01-B	9/24	1115	9	W	HZSO4	1																														X
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(15)															
700L-SW-01-B	9/24	1115	↓	W	-	4																X	X			X									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

∞

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	
Signature	Walter Bowles
Printed Name	Walter Bowles
Date	9/26/09 Time 0733
Company	Tetra Tech EC

Relinquished By: (2)	
Signature	Alaska Airlines
Printed Name	
Date	Time
Company	

Received By: (1)	
Signature	Alaska Airlines
Printed Name	
Date	Time
Company	

Received By: (2)	
Signature	Amy Wolf
Printed Name	Amy Wolf
Date	9/28/09 Time 1750
Company	ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WJO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opvjgz
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpui f mtX B!: 9122
VTB

SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

Bddpvou Op/

BjsqpsuJpgEf qbsuvsf !)Bees'!pgGjstuDbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up Cz!GjstuDbssjf s	Up!0Cz	Up!0Cz	Dvssf odz	X U0WBM	Pui f s	Ef dmbsf e!Wbmvf !Gps!Dbssjbhf	Ef dmbsf e!Wbmvf !Gps!Dvt upn t
SEA Alaska Airlines	DEN	AS	USD PX	X	X	NVD	NCV

BjsqpsuJpgEf t ujobujpo	Gjhi uEbuf	Gjhi uEbuf	Bn pvoupg.bt vsbodf
Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf df t	Hspt t X f jhi u	h ro	Dpn n pejuz Jtf n !Op/	Di bshf bcmf X f jhi u	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)bdnfEjn f ot jpot !ps!Wpmvn f *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 GSX PER 23 x 14 x16 x 1 25 x 19 x15 x 1 Volume: 30.280 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	

Prepaid	X f jhi u Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Pui f s Di bshf t

MYC 52.32
SCC 13.08

UpubmPui f s Di bshf t !Evf !Bhf ou

UpubmPui f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bu u f !qbsujdvmbst !po!u f !gbdf !i f sf pgbsf !dpssf du boe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB

U JT!TI JQNFOU!EPFT!OPU DPOUBJO EBOHFSPVT!HPPET

U JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
1,060.66

UpubmDpmmdu

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qbdf * Tjhobuvsf !pg.Jt vjoh!Dbssjf s!sfsjju !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

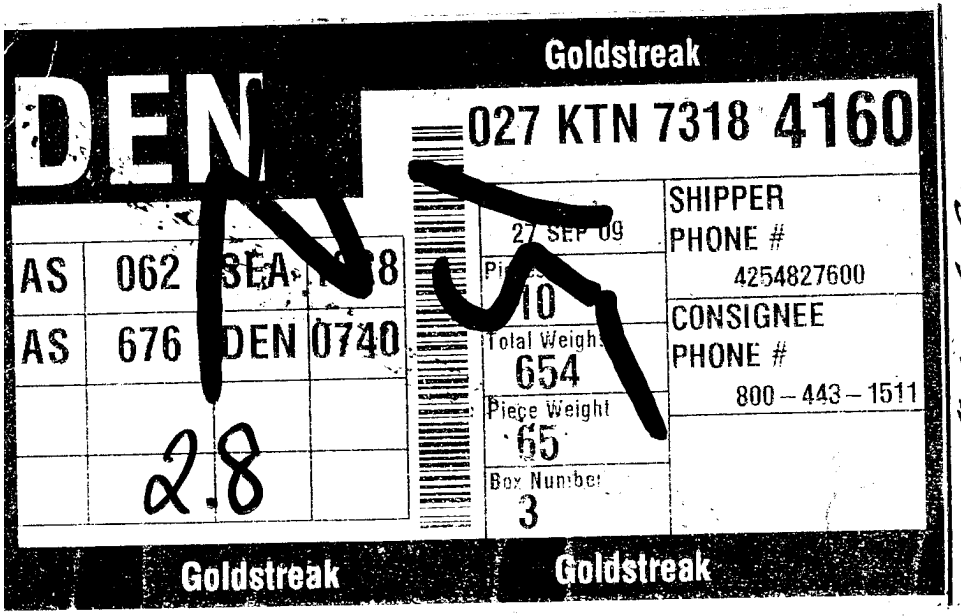
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

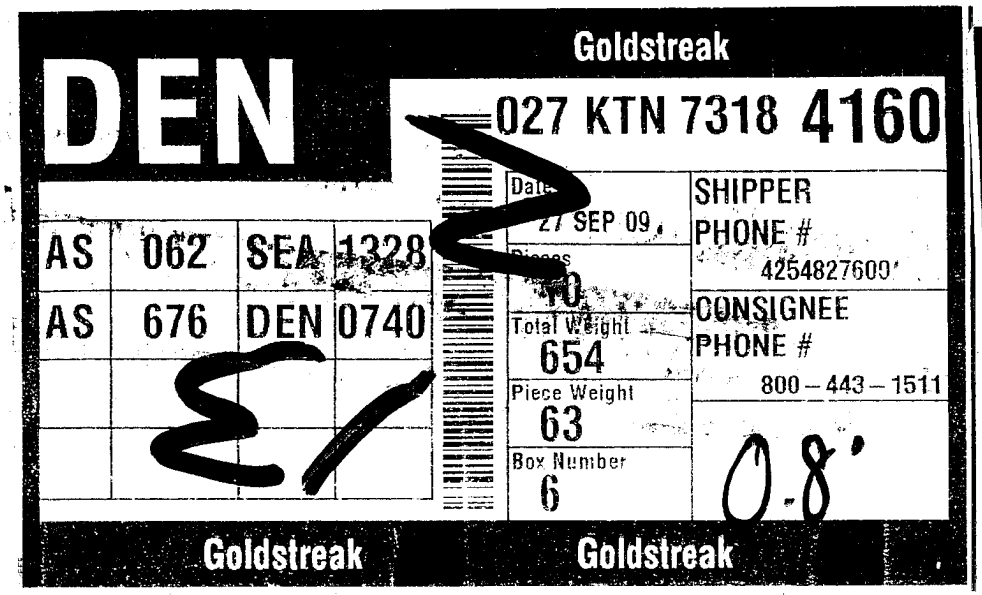

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Piece Weight
65
Box Number
10
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.2
Date
27 SEP 09
Pieces
10
Piece Weight
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.8
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.6
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
Box Numb 1
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
1.2
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
800-443-1511
2.2
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

09092 94


DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
1.4
Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RE091021-1MB

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes

Final Aliquot: 995 ml
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.03 +/- 0.26	0.49	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13840	ug	83.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RE091021-1LCS

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 21-Oct-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes

Final Aliquot: 995 ml
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	48 +/- 12	0	45.1	106	67 - 120	P,M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13310	ug	80.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909294-1DUP

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Analyte	Sample			Duplicate			DER	Control Limit
		Result +/- 2 s TPU	MDC	Qualifiers	Result +/- 2 s TPU	MDC	Qualifiers		
13982-63-3	Ra-226	0.19 +/- 0.22	0.34	U	0.07 +/- 0.18	0.33	U	0.44	2.13

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909294-1

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.19 +/- 0.22	0.34	0.4	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	12200	ug	73.4	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID:	300L-SW-01-D
Lab ID:	0909294-1DUP

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.07 +/- 0.18	0.33	0.4	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	12940	ug	77.8	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-A
Lab ID: 0909294-2

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.29 +/- 0.36	0.58	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	12220	ug	73.5	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-02-A
Lab ID: 0909294-3

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0 +/- 0.18	0.35	0.4	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13930	ug	83.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-B
Lab ID: 0909294-4

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.15 +/- 0.24	0.41	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	12900	ug	77.6	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-C
Lab ID: 0909294-5

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0 +/- 0.23	0.44	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13080	ug	78.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-D
Lab ID: 0909294-6

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 24-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.05 +/- 0.34	0.61	0.4	U,M

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	11860	ug	71.3	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 24-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.51 +/- 0.35	0.46	0.4	M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13250	ug	79.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-8

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 24-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	3.7 +/- 1.2	0.6	0.4	M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16640	13850	ug	83.3	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 8

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-B
Lab ID: 0909294-9

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 8
Date Collected: 24-Sep-09
Date Prepared: 21-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RE091021-1
QCBatchID: RE091021-1-1
Run ID: RE091021-1B
Count Time: 15 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: pCi/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.11 +/- 0.19	0.28	0.4	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16630	13260	ug	79.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE0909294-1*

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH 0909294
TEST various
METHOD Prep
SOP/REV (PREP) _____
SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

S 10/20/09

S 10/20/09

Samples 0909294-1 through -9 were received unfiltered and unpreserved. Per client instructions the samples were filtered through 0.45 µm vacuum filter and preserved to a pH below 2 with 1 mL of concentrated HNO_3. The samples were stored for 24 hours and a pH below 2 was reverified prior to sample analysis.

S 10/20/09

S 10/20/09

S 10/20/09

TECHNICIAN/ANALYST _____ DATE 10/20/09

DEPARTMENT MANAGER _____ DATE 10/20/09

374662

FORM 302r6.doc (4/22/04)

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH BE091021-1
TEST Ra226 Rn Em
METHOD 903.1
SOP/REV (PREP) 783 r8
SOP/REV (ANAL) 783 r8

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

PSW 11/10/09

Not all samples in work orders 0909293 and 0909294 achieved the requested MDC during the initial count. The affected samples were allowed to re-ingrow and counted again with an extended count time. Again the requested MDC was not achieved. Per client instructions, these samples are reported using the first count data, which had lower MDC values overall. All samples failing to meet the requested MDC are flagged with an 'M' qualifier on the final reports. PSW 11/10/09

PSW 11/10/09

PSW 11/10/09

PSW 11/10/09

TECHNICIAN/ANALYST Peter Hawkins DATE 11/10/09

DEPARTMENT MANAGER Jeff Kray DATE 11/10/09

SAMPLE # 374680

FORM 302r6.doc (4/22/04)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Radium-228

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909293

1. This report consists of the analytical results for nine water samples received by ALS on 09/28/2009.

2. These samples were prepared according to SW-846 Method 9320, SOP746R8, with procedure modifications outlined in QASS #374661. Procedure 9320 was modified as follows: The chemical yield was determined by ICP-AES measurement of the pre and post separation concentration of Ba and Y in these samples.

3. The samples were analyzed for the presence of ^{228}Ra by low background gas flow proportional counting of ^{228}Ac, which is the ingrown progeny of ^{228}Ra, according to SOP 724R10. The analyses were completed on 10/29/2009.

4. The analysis results for these samples are reported in units of pCi/L. The samples were filtered and preserved prior to analysis.

5. A laboratory control sample duplicate (LCSD) was prepared in batch RA091026-1 to meet another client's duplicate requirements. The LCSD results are included in this package as an additional QC measure.

6. The ICP-AES measurement of barium concentrations prior to chemical separation for all samples and associated QC showed concentrations less than the amount known to have been added to the samples in the form of barium carrier. To avoid a low bias in the final analytical results the known concentration of the carrier was used in chemical yield calculations in lieu of the pre-separation measurement.

7. No further anomalous situations were noted during the preparation and analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson — 11/8/09

Jean Anderson
Radiochemistry Primary Data Reviewer — Date

11/09/09

Radiochemistry Final Data Reviewer — Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909293
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
CONF-SW-01-KC	0909293-1		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-2		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-3		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-4		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-5		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-6		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-7		WATER	22-Sep-09	15:57
300L-SW-01-E	0909293-8		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-9		WATER	23-Sep-09	10:13
CONF-SW-01-KC	0909293-10		WATER	21-Sep-09	13:38
CONF-SW-01-C	0909293-11		WATER	21-Sep-09	15:50
CONF-SW-01-K	0909293-12		WATER	21-Sep-09	16:26
SPR-SW-01-A	0909293-13		WATER	22-Sep-09	12:58
300L-SW-01-A	0909293-14		WATER	22-Sep-09	13:56
300L-SW-01-B	0909293-15		WATER	22-Sep-09	15:11
300L-SW-01-C	0909293-16		WATER	22-Sep-09	15:57
300L-SW-01-D	0909293-17		WATER	22-Sep-09	16:47
700L-SW-01-A	0909293-18		WATER	23-Sep-09	10:13

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 1 of 8

Lab ID 0909293

Project Name/No.	Ross-Adams
REPORT TO:	Aaron Orechwa
PHONE:	970-420-9395
FAX:	970 223 7171
E-MAIL:	aaron.orechwa@tetratech.com
COMPANY:	Tetra Tech MMI
ADDRESS:	3401 Automation Way Suite 100 Ft Collins, CO 80525

Sampler(s): WB & LM

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	Alkalinity
CONF-SW-01-KC	9/21	1338	1	W	HZ SO4	1																				
CONF-SW-01-KC	9/21	1338		W	HN O3	2											X	X	X	X	10					
CONF-SW-01-KC	9/21	1338		W	—	4																X	X		X	
CONF-SW-01-C	9/21	1550	2	W	HZ SO4	1																				
CONF-SW-01-C	9/21	1550		W	HN O3	2											X	X	X	X	11					
CONF-SW-01-C	9/21	1550		W	—	4																X	X		X	
CONF-SW-01-K	9/21	1626	3	W	HZ SO4	1																				

	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
Circle: Am / Cm / Pu / Th / U											
E901.1											
SW9310 E900.0											
SW9315 E903.0											
E903.1											
SW9320 E904.0											
D5811											
E906.0											
SM7500Rn											

Circle Analytical Method Above

	SW8015B GRO DRO Other	SW8260C	SW8260C	SW8270D	SW8081A	SW8082	SW8151A	SW8330 SW8330B SW8321 by LC/MS/MS	SW8260C SW8270D SW8081A SW8151A	SW6010B SW7470A	SW6010B 7470A/7471A E200.7 E245.1	SW6010B 7470A/7471A E200.7 E245.1	SW6020A E200.8	SW6020A E200.8	SW7196A Alkaline Digestion? Y / N	SW9056 E300.0	TDS: E160.1 TSS: E160.2 Total: E160.3	SW9040B SW9045C E150.1	SW6850 by LC/MS/MS E314.0
Circle:																			

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Dissolved metals filtered in field

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 2 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WS

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

REFER TO PAGE 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY
CONF-SW-01-K	9/21	1626	(3)	W	HNO3	2											X	X	X	X	(12)					
CONF-SW-01-K	9/21	1626	↓	W	—	4																X	X			X
SPR-SW-01-A	9/22	1258	(4)	W	HZ SO4	1																				
SPR-SW-01-A	9/22	1258	↓	W	HNO3 HZ	2											X	X	X	X	(13)					
SPR-SW-01-A	9/22	1258	↓	W	—	4																X	X			X
300L-SW-01-A	9/22	1336	(5)	W	HNO3	2											X	X	X	X	(14)					
300L-SW-01-A	9/22	1336	↓	W	HZ SO4	1																				

Circle Analytical Method Above

Sample ID	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
CONF-SW-01-K											
CONF-SW-01-K										X	
SPR-SW-01-A											X
SPR-SW-01-A											
SPR-SW-01-A										X	
300L-SW-01-A											
300L-SW-01-A											X

Circle: Am / Cm / Pu / Th / U

TDS: E160.1 TSS: E160.2 Total: E160.3

Alkaline Digestion? Y / N

SW8015B GRO DRO Other; SW8260C; SW8260C; SW8270D; SW8081A; SW8082; SW8151A; SW8330 SW8330B SW8321 by LC/MS/MS; SW8260C SW8270D SW8081A SW8151A; SW6010B SW7470A; SW6010B 7470A/7471A E200.7 E245.1; SW6010B 7470A/7471A E200.7 E245.1; SW6020A E200.8; SW6020A E200.8; SW7196A; SW9056 E300.0; SW9040B SW9045C E150.1; SW6850 by LC/MS/MS E314.0; E901.1; SW9310 E900.0; SW9315 E903.0; E903.1; SW9320 E904.0; D5811; E906.0; SM7500Rn

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: REFER TO PAGE 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature: Walt Bowles	Signature: Alaska Air
Printed Name: Walt Bowles	Printed Name:
Date: 9/26/09 Time: 0733	Date: Time:
Company: Tetra Tech EC	Company:

Received By: (1)	Received By: (2)
Signature: Alaska Air	Signature: Amy Wolf
Printed Name:	Printed Name: Amy Wolf
Date: Time:	Date: 9/28/09 Time: 1750
Company:	Company: ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 3 of 8

Lab ID 0909293

Project Name/No.	
REPORT TO:	Refer to page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS&TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TOC
300L-SW-01-A	9/22	1552	5	W	HZ	4																X	X			X									X	
300L-SW-01-B	9/22	1511	6	W	H2SO4	1																														X
300L-SW-01-B	9/22	1511	|	W	HNO3	2											X	X	X	X	(15)															
300L-SW-01-B	9/22	1511	↓	W	—	4																X	X			X									X	
300L-SW-01-C	9/22	1557	7	W	HZ SO4	1																														X
300L-SW-01-C	9/22	1557	|	W	HNO3	2											X	X	X	X	(16)															
300L-SW-01-C	9/22	1557	↓	W	—	4																X	X			X									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature C Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909293

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

REPORT TO: Refer to Page 1
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,F,SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647	(8)	W	HZ SO4	1																													X
300L-SW-01-D	9/22	1647	↓	W	HN ON	2											X	X	X	X	(17)															
300L-SW-01-D	9/22	1647	↓	W	—	4																X	X			X									X	
700L-SW-01-A	9/23	1013	(9)	W	HZ SO4	1																													X	
700L-SW-01-A	9/23	1013	↓	W	HN ON	2											X	X	X	X	(18)															
700L-SW-01-A	9/23	1013	↓	W	—	4																X	X			X									X	
300L-SW-01-E	9/23	1111	(8)	W	HZ SO4	1	(8) ON WORK ORDER 0909294																													X

Circle Analytical Method Above

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walt Bowles	Signature Alaska Air
Printed Name Walt Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra-Tech Workorder No: 0909293

Project Manager: AW Initials: CJO Date: 9/29/09

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3. Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5. Are the **COC and bottle labels complete and legible**?		(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7 Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) ★
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10. Is there **sufficient sample** for the requested analyses?		(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12. Are all samples within **holding times** for the requested analyses?		YES	(NO) •
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16. Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17. Were the samples **shipped on ice**?		(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.4	4.2	0.8	0.6	0.8			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	18	18	13	14	14			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ The 1gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

• Samples # 1-3 were received out of hold for TDS/TSS.
↓ #4-8 ↓ ↓ on last day of hold for TDS/TSS
Samples # 9 is ok.

If applicable, was the client contacted? (YES) NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

027 KTN 7318 4160 0909293 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !BddpvoulOvn cf s
27442321321
Dvtupn f st !E!Ovn cf s
22651

Not Negotiable
Air Waybill
Jtvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpotjhof f (t !BddpvoulOvn cf s

Bmp!opygr

Uf m

Issuing Carrier's Agent and City

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22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpú f rmtX B!: 9122
VTB

SRN/1048447
HpreaTusf bl

Bhf out !JBUB!Dpef

BddpvoulOp/

Bjsqpsu!pg!Ef qbsuvsf !)Bees/!pg!Gjstu!Dbssjfs!boe!Sfrvftufe!Spvjoh
Ketchikan

Up Cz!Gjstu!Dbssjfs	Up!0Cz		Up!0Cz		Dvssfodz		X U0VBM		Pvfs		Efdmsf e!Wbmvf !Gps!Dbssjbhf	Efdmsf e!Wbmvf !Gps!Dvtupn t
SEA Alaska Airlines	DEN	AS			USD	PX	X		X		NVD	NCV

Bjsqpsu!pg!Eftujobujpo	Gjhiu!Eblf	Gjhiu!Eblf	Bnpvou!pg!Jotvsbodf
Denver	AS 062/27	AS 678/27	XXX

Iboemjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Opjpg Qjfdft	Hspt t Xfjhiu	h no			Dpn n pejuz Jfn !Op/	Di bshf bcrh Xfjhiu	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)JodmfEjn fotjpot !ps!Wpmvn f *
10	654.0	L	Q			654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 23 x 14 x16 x 1 25 x 19 x15 x 1 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0							961.38	GSX PER Volume: 30.280

Prepaid	Xfjhiu!Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

UpubnfPu f sfDi bshf t !Evf !Bhf ou

UpubnfPu f sfDi bshf t !Evf !Dbssjf s
65.40

Pu f sfDi bshf t
MYC 52.32
SCC 13.08

Ti jqqf sfdf sajgf t !u bulú f !qbsjdvmbst !polu f !gpdf ti f sf pgbsf !dpsf dúboe!ú bú**insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tihobuvsf !odTi iqqf stpsi it !Bhf ou

WS Ú JT!TI JQNFOU!EPFT!OPÚ!DPOUBJO EBOHFSPVT!HPPET

Ú JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubnfQsf qbje
1,060.66

UpubnfDpmmfdu

38!Tfq!311: 21;54 Ketchikan Alaska Airlines

Fyf dvú e!Po!)Ebú * bú)Qbdf * Tjhobuvsf !pg!Jt vjoh!Dbssjf spsju !Bhf ou

027-7318 4160

0909293

Alaska Air Cargo™
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

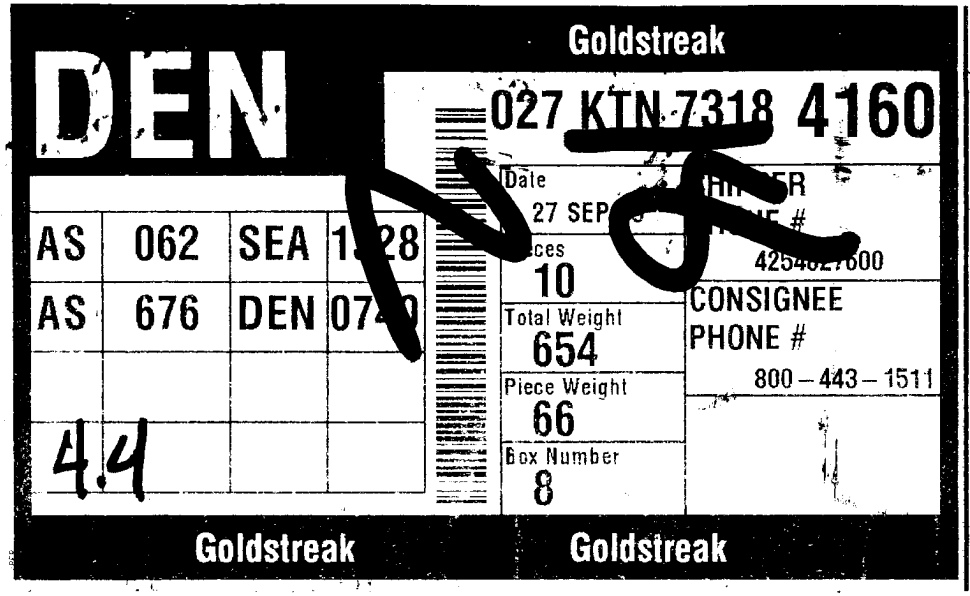
PO Number

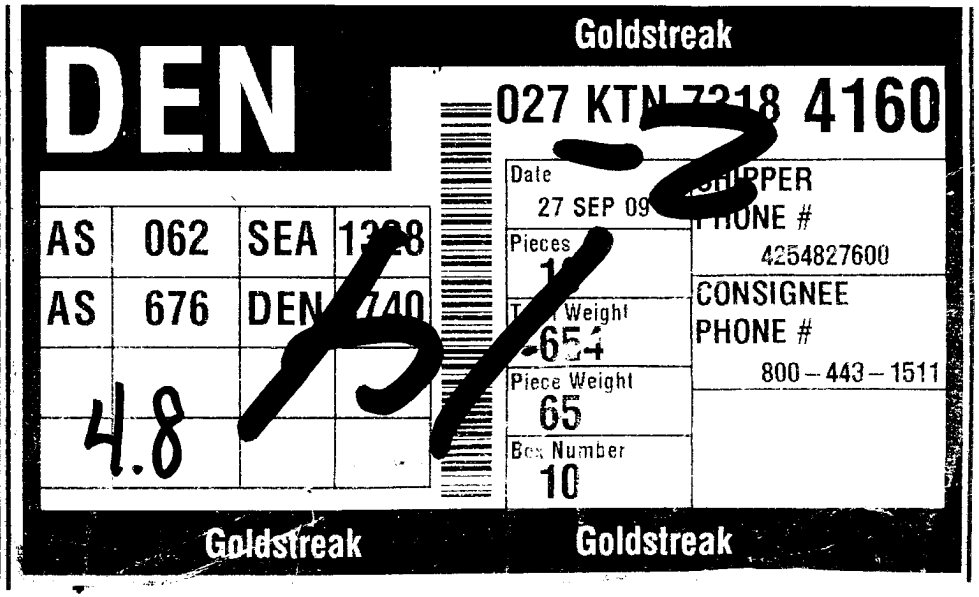
RECEIPT STATEMENT

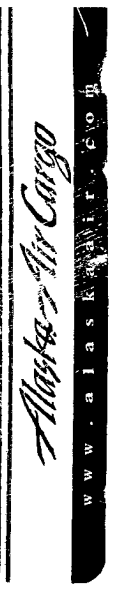
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon

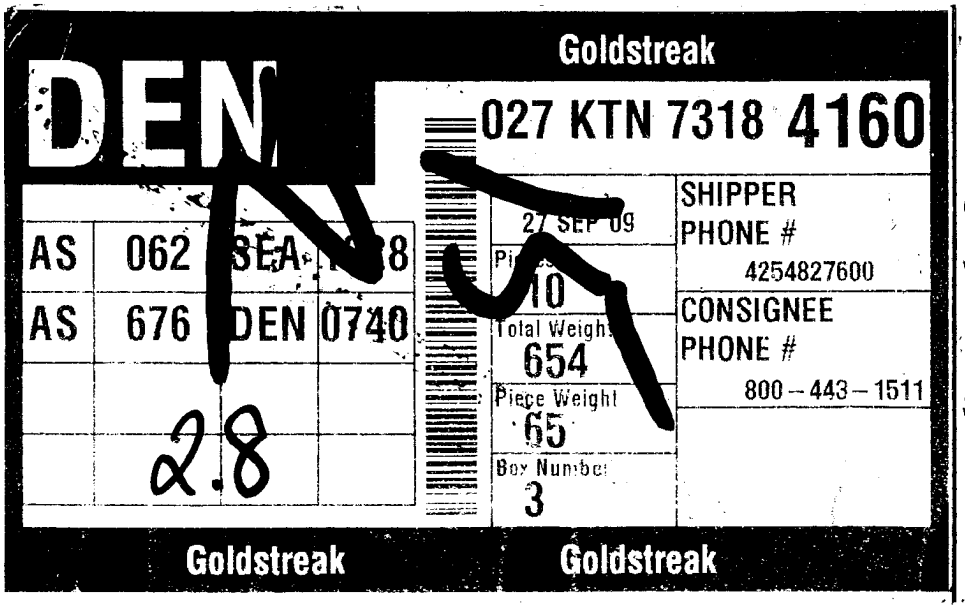
Registration:
Signature:


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.4
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
Total Weight
654
Piece Weight
65
Box Number
10
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.8
Goldstreak
Goldstreak

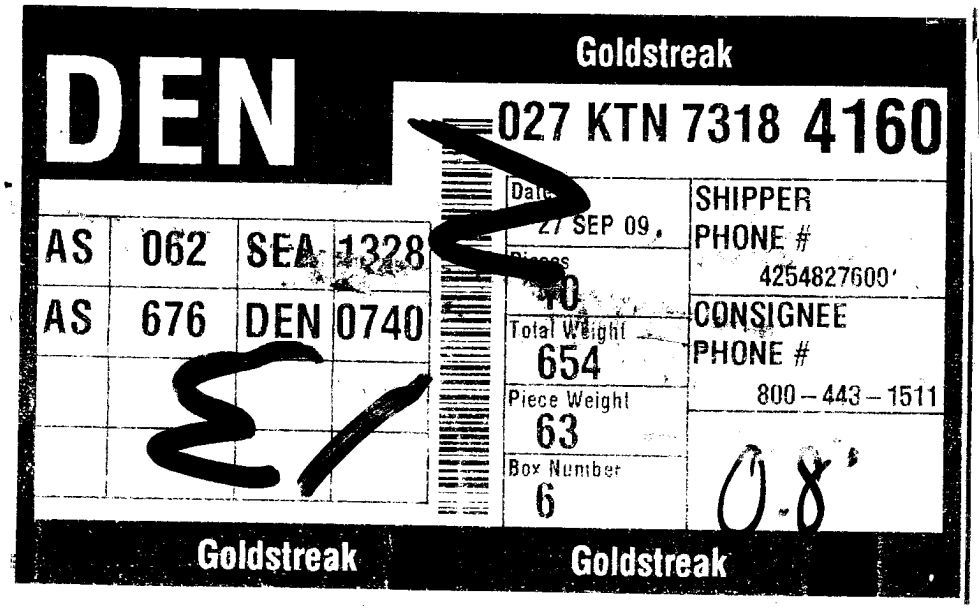

Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
2.8
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 0740
Date
27 SEP 09
Pieces
10
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
4.2
Goldstreak
Goldstreak


Alaska Air Cargo
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DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
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0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909293


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
10
Piece Weight
63
Box Number
5
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
0.8
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date
27 SEP 09
Pieces
10
Total Weight
654
Box Number
7
SHIPPER
PHONE #
4254827600
800 – 443 – 1511
1.4
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RA091026-1MB

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 26-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes

Final Aliquot: 1490 ml
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	-0.33 +/- 0.39	0.84	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32860	26870	ug	81.8	40 - 110 %	
YTTRIUM	9493	6528	ug	68.8	40 - 110 %	
Total				56.2	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RA091026-1LCS

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 26-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes

Final Aliquot: 1490 ml
Result Units: pCi/l
File Name: RAB1029

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
15262-20-1	Ra-228	16.0 +/- 4.8	0.9	14.3	112	70 - 130	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32860	27410	ug	83.4	40 - 110 %	
YTTRIUM	9493	6571	ug	69.2	40 - 110 %	
Total				57.7	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RA091026-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 26-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes

Final Aliquot: 1490 ml
Result Units: pCi/l
File Name: RAB1029

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
15262-20-1	Ra-228	11.5 +/- 3.5	0.8	14.3	80.5	70 - 130	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32860	28610	ug	87.1	40 - 110 %	
YTTRIUM	9493	6237	ug	65.7	40 - 110 %	
Total				57.2	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-K
Lab ID: 0909293-3DUP

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Analyte	Sample Result +/- 2 s TPU	Duplicate Result +/- 2 s TPU	DER	Control Limit	Lab Qualifiers
15262-20-1	Ra-228	0.44 +/- 0.39	0.20 +/- 0.36	0.45	2.13	U

Comments: This sample was filtered prior to analysis.

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID:
Lab ID: RA091026-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 26-Oct-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes

Final Aliquot: 1490 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAB1029

CASNO	Analyte	Sample Result +/- 2 s TPU	Duplicate Result +/- 2 s TPU	DER	Control Limit	Lab Qualifiers
15262-20-1	Ra-228	16.0 +/- 4.8	11.5 +/- 3.5	0.75	2.13	P

Comments: This sample was filtered prior to analysis.

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
DER - Duplicate Error Ratio (see PAI SOP 715)
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-KC
Lab ID: 0909293-1

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.29 +/- 0.35	0.71	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32900	28850	ug	87.7	40 - 110 %	
YTTRIUM	9493	6779	ug	71.4	40 - 110 %	
Total				62.6	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-C
Lab ID: 0909293-2

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.13 +/- 0.36	0.75	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32900	27850	ug	84.7	40 - 110 %	
YTTRIUM	9493	6481	ug	68.3	40 - 110 %	
Total				57.8	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: CONF-SW-01-K
Lab ID: 0909293-3

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.44 +/- 0.39	0.75	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32900	28870	ug	87.8	40 - 110 %	
YTTRIUM	9493	6524	ug	68.7	40 - 110 %	
Total				60.3	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID:	CONF-SW-01-K
Lab ID:	0909293-3DUP

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 21-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.20 +/- 0.36	0.74	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32900	29090	ug	88.4	40 - 110 %	
YTTRIUM	9493	6769	ug	71.3	40 - 110 %	
Total				63.0	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: SPR-SW-01-A
Lab ID: 0909293-4

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.30 +/- 0.40	0.80	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32900	26320	ug	80.0	40 - 110 %	
YTTRIUM	9493	6946	ug	73.2	40 - 110 %	
Total				58.5	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-A
Lab ID: 0909293-5

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.13 +/- 0.37	0.78	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32900	28910	ug	87.9	40 - 110 %	
YTTRIUM	9493	6614	ug	69.7	40 - 110 %	
Total				61.2	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-B
Lab ID: 0909293-6

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1490 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.53 +/- 0.43	0.80	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32860	27300	ug	83.1	40 - 110 %	
YTTRIUM	9493	6380	ug	67.2	40 - 110 %	
Total				55.8	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-C
Lab ID: 0909293-7

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.45 +/- 0.45	0.88	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32900	27400	ug	83.3	40 - 110 %	
YTTRIUM	9493	6125	ug	64.5	40 - 110 %	
Total				53.7	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-E
Lab ID: 0909293-8

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 22-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1490 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	3.4 +/- 1.1	0.8	1	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32860	28760	ug	87.5	40 - 110 %	
YTTRIUM	9493	6405	ug	67.5	40 - 110 %	
Total				59.0	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909293
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-A
Lab ID: 0909293-9

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 26-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: RA091026-1
QCBatchID: RA091026-1-1
Run ID: RA091026-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1490 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1029

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.07 +/- 0.39	0.82	1	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	32860	27770	ug	84.5	40 - 110 %	
YTTRIUM	9493	6757	ug	71.2	40 - 110 %	
Total				60.1	40 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: *RA0909293-1*

ALS Laboratory Group - Fort Collins

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH 0909293

TEST various

METHOD Prep

SOP/REV (PREP) _____

SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

10/20/09

10/20/09

Samples 0909293-1 through -9 were received unfiltered and unpreserved. Per client instructions the samples were filtered through 0.45 µm vacuum filter and preserved to a pH below 2 with 1 mL of concentrated HNO_3. The samples were stored for 24 hours and a pH below 2 was reverified prior to sample analysis.

10/20/09

10/20/09

10/20/09

TECHNICIAN/ANALYST _____ DATE 10/20/09

DEPARTMENT MANAGER _____ DATE 10/21/09

374661

FORM 302r6.doc (4/22/04)

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Radium-228

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of the analytical results for nine water samples received by ALS on 09/28/2009.

2. These samples were prepared according to SW-846 Method 9320, SOP746R8, with procedure modifications outlined in QASS #374662. Procedure 9320 was modified as follows: The chemical yield was determined by ICP-AES measurement of the pre and post separation concentration of Ba and Y in these samples.

3. The samples were analyzed for the presence of ^{228}Ra by low background gas flow proportional counting of ^{228}Ac, which is the ingrown progeny of ^{228}Ra, according to SOP 724R10. The analyses were completed on 11/18/2009.

4. The analysis results for these samples are reported in units of pCi/L. The samples were filtered prior to analysis.

5. Sample volume was insufficient to allow preparation of a duplicate. A laboratory control sample duplicate (LCSD) was prepared in lieu of a client sample duplicate in batch RA091113-1.

6. The ICP-AES measurement of barium concentrations prior to chemical separation for samples 0909294-2, -3, -4, -5, -7, -8, -9, and associated QC showed concentrations less than the amount known to have been added to the samples in the form of barium carrier. To avoid a low bias in the final analytical results the known concentration of the carrier was used in chemical yield calculations in lieu of the pre-separation measurement.

7. Similarly, a significant low bias (greater than -15%) was observed in the pre-separation ICP measurement for sample 0909294-6. This may be an indication of some matrix interference in the initial yield determination. To minimize low bias in the final analytical results the known concentration of the carrier solution was used in chemical yield calculations in lieu of the preseparation measurement.

8. Samples 0909294-1 through - 9 were initially prepared in batch RA091028-1 on 10/28/2009. The radiometric recovery for the laboratory control sample (LCS) was below the lower control limit of 70% at 59.6%. There is the potential for a low bias to the reported analytical results from this batch. Due to insufficient volume available, sample -7 and -8 were not re-prepared. The results from batch RA091028-1 for these samples will be reported. Samples 0909294-1 through -7 and -9 were re-prepared in batch RA091113-1 on 11/13/2009. All quality control criteria were achieved for the re-preparation. The results of these samples will be reported from RA091113-1 without further qualification. Please refer to NCR #11693.

9. No further anomalous situations were noted during the preparation and analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson — 11/25/09
Jean Anderson — Date
Radiochemistry Primary Data Reviewer

11-25-09
Radiochemistry Final Data Reviewer — Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01-D	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-D	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-C	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
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Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due

Disposal By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																													X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X								X	
700L-SW-01-A	9/23	1013		W	HNO3	1																													X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X								X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																													X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/23/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.

REPORT TO:

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Refer to Page 1

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
300L-SW-01-E	9/23	1111	1	W	HNO3	2											X	X	X	X	10																
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X		
900L-SW-01-A	9/23	1530	2	W	HZSO4	1																														X	
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	11																
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X		
900L-SW-02-A	9/23	1530	3	W	HZSO4	1																														X	
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	12																

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/25/09 Time 1750
Company ALS-FC

5

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

ALS Laboratory Group

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Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,SO4	Solids TDS+TSS	pH	Perchlorate	Alkalinity
900L-SW-02-A	9/23	1530	3	W	–	4																X	X			X
900L-SW-01-B	9/23	1605	4	W	HZ SO4	1																				
900L-SW-01-B	9/23	1605	↓	W	HN O3	2											X	X	X	X	13					
900L-SW-01-B	9/23	1605	↓	W	–	4																X	X			X
900L-SW-01-C	9/23	1635	5	W	HZ SO4	1																				
900L-SW-01-C	9/23	1635	↓	W	HN O3	2											X	X	X	X	14					
900L-SW-01-C	9/23	1635	↓	W	–	4																X	X			X

Actinides	**Gamma Isotopes**	**Gross Alpha / Beta**	**Total Alpha-Emitting Radium**	**Radium 226**	**Radium 228**	**Strontium 90** (Total RadioSr)	**Tritium**	**Radon 222**	RADIOCHEM	ITC
									X	
										X
									X	
										X
									X	

Circle Analytical Method Above

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

SW8015B GRO DRO Other | SW8260C | SW8260C | SW8270D | SW8081A | SW8082 | SW8151A | SW8330 SW8330B SW8321 by LC/MS/MS | SW8260C SW8270D SW8081A SW8151A | SW6010B SW7470A | SW6010B 7470A/7471A E200.7 E245.1 | SW6010B 7470A/7471A E200.7 E245.1 | SW6020A E200.8 | SW6020A E200.8 | SW7196A Alkaline Digestion? Y / N | SW9056 E300.0 | TDS: E160.1 TSS: E160.2 Total: E160.3 | SW9040B SW9045C E150.1 | SW6850 by LC/MS/MS E314.0

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	
Signature	Walter Bowles
Printed Name	Walter Bowles
Date	9/26/09 Time 0733
Company	Tetra Tech FC

Relinquished By: (2)	
Signature	Alaska Air
Printed Name	
Date	Time
Company	

Received By: (1)	
Signature	Alaska Air
Printed Name	
Date	Time
Company	

Received By: (2)	
Signature	Amy Wolf
Printed Name	Amy Wolf
Date	9/26/09 Time 1750
Company	ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions Cl, F, SO4 SW9056 E300.0	Solids TDS, TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	Alkalinity	Actinides Circle: Am / Cm / Pu / Th / U	Gamma Isotopes E901.1	Gross Alpha / Beta SW9310 E900.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811	Tritium E906.0	Radon 222 SM7500Rn	Radioactivity	TOC
900L-SW-01-D	9/24	0948	6	W	HZ SO4	1																														X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	15															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X							X		
900L-SW-01-E	9/24	1015	7	W	HZ SO4	1																														X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	16															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X							X		
900L-SW-01-F	9/24	1040	8	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature CJ Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due ____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8330B SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions(La SO4) SW9056 E300.0	Solids TDS+TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	ALKALINITY	Actinides Circle: Am / Cm / Pu / Th / U E901.1	Gamma Isotopes SW9310 E900.0	Gross Alpha / Beta SW9315 E903.0	Total Alpha-Emitting Radium E903.1	Radium 226 SW9320 E904.0	Radium 228 D5811	Strontium 90 (Total RadioSr) E906.0	Tritium SM7500Rn	Radon 222	RADIOCHEM	TDS
900L-SW-01-F	9/24	1040	(8)	W	HNO3	2											X	X	X	X	(17)														
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X								X	
700L-SW-01-B	9/24	1115	(9)	W	HZSO4	1																													X
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(19)														
700L-SW-01-B	9/24	1115	↓	W	-	4																X	X			X								X	

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Airlines
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Airlines
Printed Name
Date Time
Company

Received By: (2)
Signature Cwolf
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WJO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opvjgz
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpui f mtX B!: 9122
VTB

SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

Bddpvou Op/

BjsqpsuJpgEf qbsuvsf !)Bees'!pgGjstuDbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up Cz!GjstuDbssjf s	Up!0Cz	Up!0Cz	Dvssf odz	X U0WBM	Pui f s	Ef dmbsf e!Wbmvf !Gps!Dbssjbhf	Ef dmbsf e!Wbmvf !Gps!Dvt upn t
SEA Alaska Airlines	DEN	AS	USD PX	X	X	NVD	NCV

BjsqpsuJpgEf t ujobujpo	Gjhi uEbuf	Gjhi uEbuf	Bn pvoupg.bt vsbodf
Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf df t	Hspt t X f jhi u	h ro	Dpn n pejuz Jtf n !Op/	Di bshf bcmf X f jhi u	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)bdnfEjn f ot jpot !ps!Wpmvn f *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 GSX PER 23 x 14 x16 x 1 25 x 19 x15 x 1 Volume: 30.280 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	

Prepaid	X f jhi u Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Pui f s Di bshf t

MYC 52.32
SCC 13.08

UpubmPui f s Di bshf t !Evf !Bhf ou

UpubmPui f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bu u f !qbsujdvmbst !po!u f !gbdf !i f sf pgbsf !dpssf du boe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB

U JT!TI JQNFOU!EPFT!OPU DPOUBJO EBOHFSPVT!HPPET

U JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
1,060.66

UpubmDpmmdu

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qbdf * Tjhobuvsf !pg.Jt vjoh!Dbssjf s!sfsjju !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

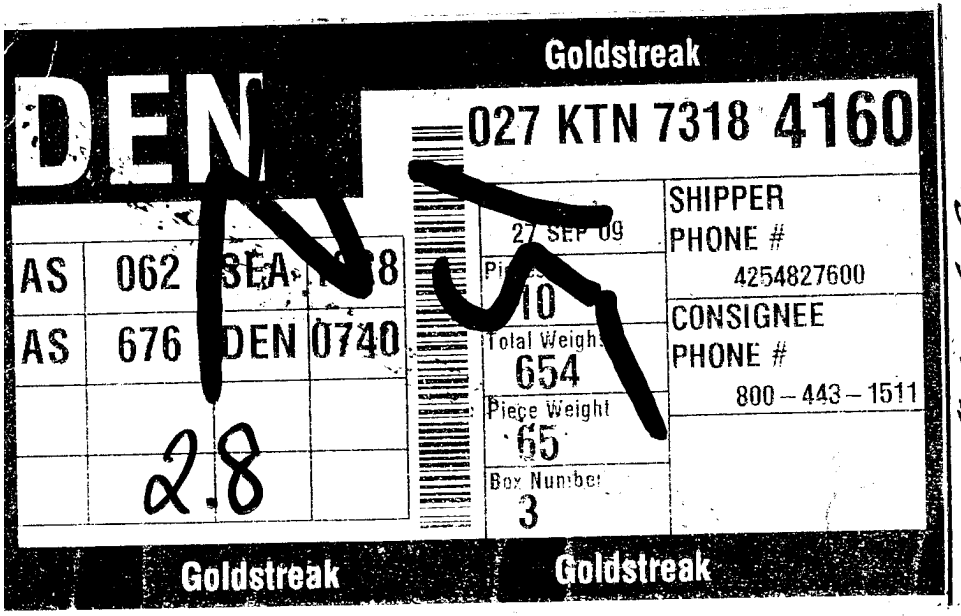
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

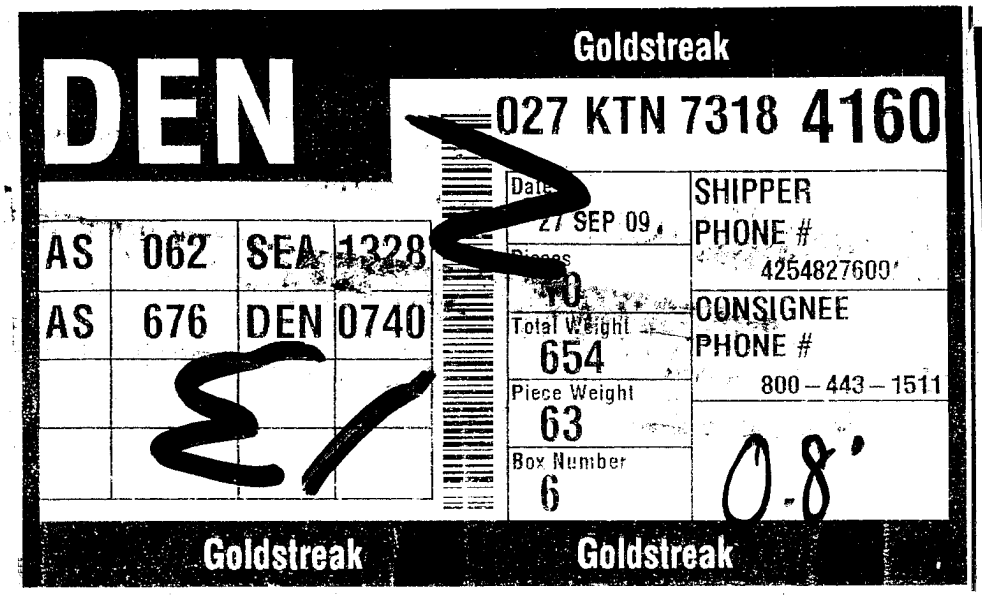

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Piece Weight
65
Box Number
10
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
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Piece Weight
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SHIPPER
PHONE #
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CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
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027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
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Date
27 SEP 09
Pieces
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Piece Weight
64
Box Number
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SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


Goldstreak
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AS 676 DEN 0740
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Total Weight
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AS 676 DEN 0740
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Goldstreak

0909294


Goldstreak
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AS 676 DEN
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AS 062 SEA 1328
AS 676 DEN 0740
Date
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Total Weight
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Piece Weight
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Box Number
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PHONE #
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Alaska Air Cargo
www.alaskaair.com

09092 94


DEN
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027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
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PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RA091028-1MB

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 28-Oct-09
Date Prepared: 28-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RA091028-1
QCBatchID: RA091028-1-1
Run ID: RA091028-1A
Count Time: 250 minutes

Final Aliquot: 1490 ml
Result Units: pCi/l
File Name: RAC1102

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.02 +/- 0.34	0.72	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RA091113-1MB

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 13-Nov-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 250 minutes

Final Aliquot: 1490 ml
Result Units: pCi/l
File Name: RAC1118

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.02 +/- 0.36	0.77	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RA091028-1LCS

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 28-Oct-09
Date Prepared: 28-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RA091028-1
QCBatchID: RA091028-1-1
Run ID: RA091028-1A
Count Time: 250 minutes

Final Aliquot: 1490 ml
Result Units: pCi/l
File Name: RAC1102

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
15262-20-1	Ra-228	8.5 +/- 2.6	0.7	14.3	59.6	70 - 130	L

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RA091113-1LCS

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 13-Nov-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 60 minutes

Final Aliquot: 1490 ml
Result Units: pCi/l
File Name: RAC1118A

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
15262-20-1	Ra-228	13.0 +/- 4.1	1.5	14.2	91.5	70 - 130	P,M3

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: RA091113-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 13-Nov-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 60 minutes

Final Aliquot: 1490 ml
Result Units: pCi/l
File Name: RAC1118B

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
15262-20-1	Ra-228	15.4 +/- 4.9	1.9	14.2	108	70 - 130	P,M3

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID:
Lab ID: RA091113-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 13-Nov-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 60 minutes

Final Aliquot: 1490 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1118B

CASNO	Analyte	Sample			Duplicate			DER	DER Lim
		Result +/- 2 s TPU	MDC	Flags	Result +/- 2 s TPU	MDC	Flags		
15262-20-1	Ra-228	13.0 +/- 4.1	1.5	P,M3	15.4 +/- 4.9	1.9	P,M3	0.37	2.13

Comments: This sample was filtered prior to analysis.

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 300L-SW-01-D
Lab ID: 0909294-1

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1118

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.13 +/- 0.32	0.66	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-A
Lab ID: 0909294-2

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1118

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.13 +/- 0.35	0.74	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-02-A
Lab ID: 0909294-3

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1118

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.07 +/- 0.35	0.74	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-B
Lab ID: 0909294-4

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1118

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.24 +/- 0.43	0.87	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-C
Lab ID: 0909294-5

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 23-Sep-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1118

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.58 +/- 0.41	0.75	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-D
Lab ID: 0909294-6

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 24-Sep-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1118

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	-0.02 +/- 0.43	0.91	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 24-Sep-09
Date Prepared: 28-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RA091028-1
QCBatchID: RA091028-1-1
Run ID: RA091028-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1490 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1102

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	0.70 +/- 0.43	0.74	1	U

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-8

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 24-Sep-09
Date Prepared: 28-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: RA091028-1
QCBatchID: RA091028-1-1
Run ID: RA091028-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1490 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1102

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	5.5 +/- 1.7	0.7	1	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

Radium-228 Analysis by GFPC

PAI 724 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 700L-SW-01-B
Lab ID: 0909294-9

Sample Matrix: WATER
Prep SOP: PAI 746 Rev 8
Date Collected: 24-Sep-09
Date Prepared: 13-Nov-09
Date Analyzed: 18-Nov-09

Prep Batch: RA091113-1
QCBatchID: RA091113-1-1
Run ID: RA091113-1A
Count Time: 250 minutes
Report Basis: Filtered

Final Aliquot: 1500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: RAC1118

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
15262-20-1	Ra-228	1.28 +/- 0.57	0.79	1	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RA0909294-1*

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH 0909294
TEST various
METHOD Prep
SOP/REV (PREP) _____
SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

S 10/20/09

S 10/20/09

Samples 0909294-1 through -9 were received unfiltered and unpreserved. Per client instructions the samples were filtered through 0.45 µm vacuum filter and preserved to a pH below 2 with 1 mL of concentrated HNO_3. The samples were stored for 24 hours and a pH below 2 was reverified prior to sample analysis.

S 10/20/09

S 10/20/09

S 10/20/09

TECHNICIAN/ANALYST _____ DATE 10/20/09

DEPARTMENT MANAGER _____ DATE 10/20/09

374662

FORM 302r6.doc (4/22/04)

NCR #: 11693

CONTROLLED
NON-CONFORMANCE REPORT

Non-Conformance

Initiated By: Derek B. Caduff on 11/4/2009

Event Type: Lab QC Criteria Not Met -- LCS

Event Explanation: The radiometric recovery for the Laboratory Control Sample for prep batch RA091028-1 was below the LCL of 70% at 59.6%. There is the potential for a low bias to the reported analytical results to this batch.

Action To Prevent Reccurence: Discussion with supervisor

Corrective Action

Corrective Action: Submit for Re-Prep

Department Manager Approval: Renee Gallegos

Approval Date: 11/19/2009

Corrective Action Comments: Sufficient volume for the repreparation of samples 0909294-1 through -6 and -9. The results for samples 0909294-7 and -8 will be reported noting the potential bias due to the low radiometric recovery for the batch.

Workorders Affected

Workorder -- Procedure		Approved By	Approval Date
0909294 -- PAI 746	Bruce Marshall was contacted on 11/5/2009	Amy R. Wolf	11/19/2009

Associated Batches

The samples were originally associated with the following Batch(es):

RA091028-1 created on 10/28/2009

All rework was completed in the following Batch(es):

RA091113-1 created on 11/13/2009

Outcome: All data quality objectives were met for this batch. The LCS and the LCSD were within control limits at 91.5% and 108%, respectively.

Outcome Approved By: Renee Gallegos

Approved on: 11/24/2009

NCR Approval

Date Printed: Wednesday, November 25, 2009

ALS USA, Corp
Part of the ALS Laboratory Group
225 Commerce Drive Ft. Collins, Colorado 80524
Phone (970) 490-1511 Fax (970) 490-1522 www.alsenviro.com
A Campbell Brothers Limited Company

NCR #: 11693

CONTROLLED
NON-CONFORMANCE REPORT

Project Manager Approval: KDC on 11/24/2009

Department Manager Approval: Renee Gallegos on 11/24/2009

QA Manager Approval: Ken Campbell on 11/24/2009

ALS USA, Corp
Part of the ALS Laboratory Group
225 Commerce Drive Ft. Collins, Colorado 80524
Phone (970) 490-1511 Fax (970) 490-1522 www.alsenviro.com
A Campbell Brothers Limited Company

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Isotopic Thorium

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of the analytical results for two water samples received by ALS on 09/28/2009.

2. These samples were prepared according to procedures SOP776R11 and SOP777R9.

3. The samples were analyzed for the presence of isotopic thorium according to procedure SOP714R11. The analyses were completed on 11/02/2009.

4. The analysis results for these samples are reported in units of pCi/L. The samples were filtered and preserved prior to analysis.

5. Thorium-232 activity is reported in the associated method blank above the minimum detectable concentration value. The measured blank activity is below the requested MDC of 0.2 pCi/L. Results are acceptable according to SOP715R15, and are submitted without further qualification.

6. These samples were initially prepared in batch AS091022-2 on 10/22/2009. The tracer yield for AS091022-2MB is below the lower control limit of 30% at ~7%. These samples were re-prepared in batch AS091030-2 on 10/30/2009. All quality control criteria were achieved for the re-preparation. The results of these samples will be reported from AS0091030-2 without further qualification. Please refer to NCR #11683.

7. No further anomalous situations were encountered during the preparation or analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson
Radiochemistry Primary Data Reviewer

11/12/09
Date

Radiochemistry Final Data Reviewer

11/12/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01-D	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-D	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-C	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
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Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due

Disposal By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																													X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X								X	
700L-SW-01-A	9/23	1013		W	HNO3	1																													X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X								X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																													X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/23/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.

REPORT TO:

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Refer to Page 1

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
300L-SW-01-E	9/23	1111	1	W	HNO3	2											X	X	X	X	10																
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X		
900L-SW-01-A	9/23	1530	2	W	HZSO4	1																														X	
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	11																
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X		
900L-SW-02-A	9/23	1530	3	W	HZSO4	1																														X	
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	12																

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/25/09 Time 1750
Company ALS-FC

5

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

ALS Laboratory Group

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Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,SO4	Solids TDS+TSS	pH	Perchlorate	Alkalinity
900L-SW-02-A	9/23	1530	3	W	–	4																X	X			X
900L-SW-01-B	9/23	1605	4	W	HZ SO4	1																				
900L-SW-01-B	9/23	1605	↓	W	HN O3	2											X	X	X	X	13					
900L-SW-01-B	9/23	1605	↓	W	–	4																X	X			X
900L-SW-01-C	9/23	1635	5	W	HZ SO4	1																				
900L-SW-01-C	9/23	1635	↓	W	HN O3	2											X	X	X	X	14					
900L-SW-01-C	9/23	1635	↓	W	–	4																X	X			X

Circle: Am / Cm / Pu / Th / U																										
E901.1																										
SW9310 E900.0																										
SW9315 E903.0																										
E903.1																										
SW9320 E904.0																										
D5811																										
E906.0																										
SM7500Rn																										

Circle Analytical Method Above

Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	ITC
									X	
										X
									X	
										X
									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Air
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Air	Signature
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/26/09 Time 1750
Company	Company ALS-FC

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions Cl, F, SO4 SW9056 E300.0	Solids TDS, TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	Alkalinity	Actinides Circle: Am / Cm / Pu / Th / U	Gamma Isotopes E901.1	Gross Alpha / Beta SW9310 E900.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811	Tritium E906.0	Radon 222 SM7500Rn	Radioactivity	TOC
900L-SW-01-D	9/24	0948	6	W	HZ SO4	1																														X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	15															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X							X		
900L-SW-01-E	9/24	1015	7	W	HZ SO4	1																														X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	16															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X							X		
900L-SW-01-F	9/24	1040	8	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature CJ Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions(Cl,SO4)	Solids TDS+TSS	pH	Perchlorate	Alkalinity	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	Radiochem	TDS
900L-SW-01-F	9/24	1040	8	W	HNO3	2											X	X	X	X	(17)															
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X									X	
700L-SW-01-B	9/24	1115	9	W	HZSO4	1																														X
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(15)															
700L-SW-01-B	9/24	1115	↓	W	-	4																X	X			X									X	

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

∞

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	
Signature	Walter Bowles
Printed Name	Walter Bowles
Date	9/26/09 Time 0733
Company	Tetra Tech EC

Relinquished By: (2)	
Signature	Alaska Airlines
Printed Name	
Date	Time
Company	

Received By: (1)	
Signature	Alaska Airlines
Printed Name	
Date	Time
Company	

Received By: (2)	
Signature	Amy Wolf
Printed Name	Amy Wolf
Date	9/28/09 Time 1750
Company	ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WJO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opvjgz
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpui f mtX B!: 9122
VTB

SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

Bddpvou Op/

BjsqpsuJpgEf qbsuvsf !)Bees'!pgGjstuDbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up Cz!GjstuDbssjf s	Up!0Cz	Up!0Cz	Dvssf odz	X U0WBM	Pui f s	Ef dmbsf e!Wbmvf !Gps!Dbssjbhf	Ef dmbsf e!Wbmvf !Gps!Dvt upn t
SEA Alaska Airlines	DEN	AS	USD PX	X	X	NVD	NCV

BjsqpsuJpgEf t ujobujpo	Gjhi uEbuf	Gjhi uEbuf	Bn pvoupg.bt vsbodf
Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf df t	Hspt t X f jhi u	h ro	Dpn n pejuz Jtf n !Op/	Di bshf bcmf X f jhi u	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)bdnfEjn f ot jpot !ps!Wpmvn f *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 GSX PER 23 x 14 x16 x 1 25 x 19 x15 x 1 Volume: 30.280 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	

Prepaid	X f jhi u Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Pui f s Di bshf t

MYC 52.32
SCC 13.08

UpubmPui f s Di bshf t !Evf !Bhf ou

UpubmPui f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bu u f !qbsujdvmbst !po!u f !gbdf !i f sf pgbsf !dpssf du boe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB

U JT!TI JQNFOU!EPFT!OPU DPOUBJO EBOHFSPVT!HPPET

U JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
1,060.66

UpubmDpmmdu

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qbdf * Tjhobuvsf !pg.Jt vjoh!Dbssjf s!sfsjju !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

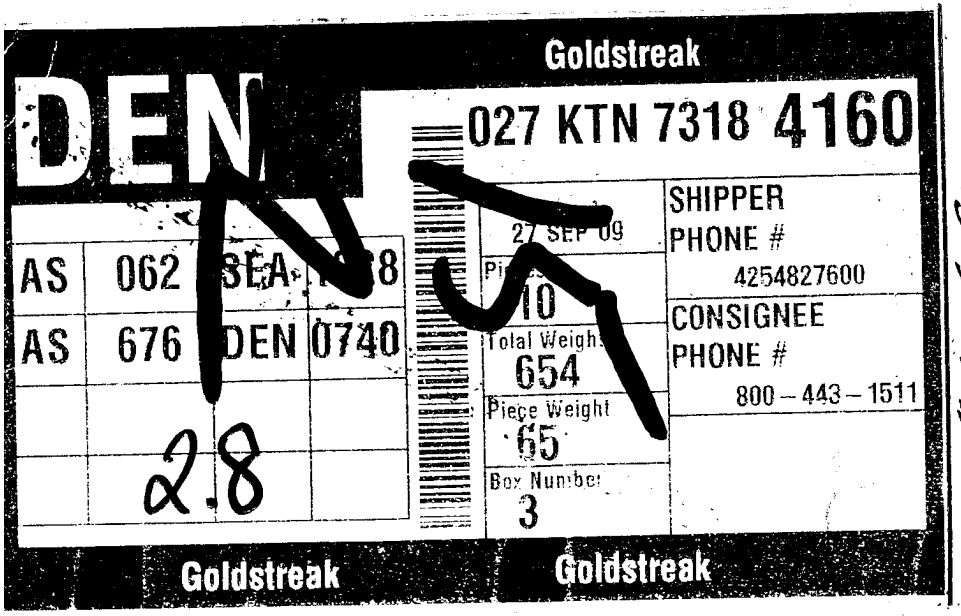
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

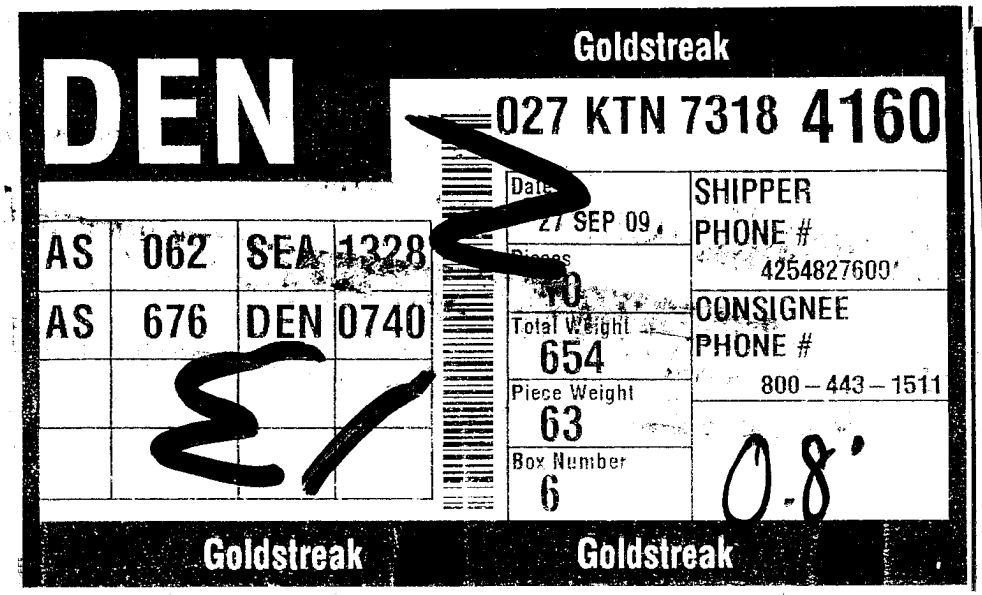

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Piece Weight
65
Box Number
10
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.2
Date
27 SEP 09
Pieces
10
Piece Weight
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.8
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.6
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
Box Numb 1
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
1.2
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
800-443-1511
2.2
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
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Piece Weight
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Box Number
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SHIPPER
PHONE #
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PHONE #
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Goldstreak
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Alaska Air Cargo
www.alaskaair.com

09092 94


DEN
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027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
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Date
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Pieces
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Total Weight
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Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AS091030-2MB

Sample Matrix: WATER
Prep SOP: PAI 777 Rev 9
Date Collected: 30-Oct-09
Date Prepared: 30-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: AS091030-2
QCBatchID: AS091030-2-1
Run ID: AS091030-2A
Count Time: 1000 minutes

Final Aliquot: 1000 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14274-82-9	Th-228	-0.004 +/- 0.035	0.064	0.2	U
14269-63-7	Th-230	0.009 +/- 0.045	0.078	0.2	U
7440-29-1	Th-232	0.011 +/- 0.011	0.006	0.2	B3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Th-229	4.428	2.93	pCi/l	66.1	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *TH0909294-1*

Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AS091030-2LCS

Sample Matrix: WATER
Prep SOP: PAI 777 Rev 9
Date Collected: 30-Oct-09
Date Prepared: 30-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: AS091030-2
QCBatchID: AS091030-2-1
Run ID: AS091030-2A
Count Time: 1000 minutes

Final Aliquot: 1000 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14269-63-7	Th-230	5.20 +/- 0.84	0.08	5.11	102	85 - 121	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Th-229	4.428	2.67	pCi/l	60.4	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *TH0909294-1*

Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7DUP

Sample Matrix: WATER
Prep SOP: PAI 777 Rev 9
Date Collected: 24-Sep-09
Date Prepared: 30-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: AS091030-2
QCBatchID: AS091030-2-1
Run ID: AS091030-2A
Count Time: 1000 minutes
Report Basis: Filtered

Final Aliquot: 1000 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Analyte	Sample			Duplicate			DER	Control Limit
		Result +/- 2 s TPU	MDC	Qualifiers	Result +/- 2 s TPU	MDC	Qualifiers		
14274-82-9	Th-228	0.128 +/- 0.083	0.122	LT	0.107 +/- 0.052	0.067	LT	0.21	2.13
14269-63-7	Th-230	0.141 +/- 0.075	0.101	LT	0.093 +/- 0.055	0.080	LT	0.51	2.13
7440-29-1	Th-232	0.018 +/- 0.025	0.042	U	0.014 +/- 0.018	0.028	U	0.12	2.13

Comments: This sample was filtered prior to analysis.

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *TH0909294-1*

Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7

Sample Matrix: WATER
Prep SOP: PAI 777 Rev 9
Date Collected: 24-Sep-09
Date Prepared: 30-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: AS091030-2
QCBatchID: AS091030-2-1
Run ID: AS091030-2A
Count Time: 1000 minutes
Report Basis: Filtered

Final Aliquot: 1000 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14274-82-9	Th-228	0.128 +/- 0.083	0.122	0.2	LT
14269-63-7	Th-230	0.141 +/- 0.075	0.101	0.2	LT
7440-29-1	Th-232	0.018 +/- 0.025	0.042	0.2	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Th-229	4.428	1.85	pCi/l	41.8	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *TH0909294-1*

Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID:	900L-SW-01-E
Lab ID:	0909294-7DUP

Sample Matrix: WATER
Prep SOP: PAI 777 Rev 9
Date Collected: 24-Sep-09
Date Prepared: 30-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: AS091030-2
QCBatchID: AS091030-2-1
Run ID: AS091030-2A
Count Time: 1000 minutes
Report Basis: Filtered

Final Aliquot: 1000 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14274-82-9	Th-228	0.107 +/- 0.052	0.067	0.2	LT
14269-63-7	Th-230	0.093 +/- 0.055	0.080	0.2	LT
7440-29-1	Th-232	0.014 +/- 0.018	0.028	0.2	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Th-229	4.428	2.70	pCi/l	61.0	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *TH0909294-1*

Isotopic Thorium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-8

Sample Matrix: WATER
Prep SOP: PAI 777 Rev 9
Date Collected: 24-Sep-09
Date Prepared: 30-Oct-09
Date Analyzed: 02-Nov-09

Prep Batch: AS091030-2
QCBatchID: AS091030-2-1
Run ID: AS091030-2A
Count Time: 1000 minutes
Report Basis: Filtered

Final Aliquot: 1000 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14274-82-9	Th-228	1.04 +/- 0.20	0.07	0.2	
14269-63-7	Th-230	0.95 +/- 0.19	0.09	0.2	
7440-29-1	Th-232	0.198 +/- 0.057	0.021	0.2	LT

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
Th-229	4.428	2.25	pCi/l	50.8	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *TH0909294-1*

NCR #: 11683

CONTROLLED
NON-CONFORMANCE REPORT

Non-Conformance

Initiated By: Erin M. Finsley on 10/29/2009

Event Type: Lab QC Criteria Not Met -- Tracer Yield

Event Explanation: The tracer yield for the batch method blank (AS091022-2MB) is below the LCL of 30% at ~7%.

Action To Prevent Reccurence: Discussion with prep analyst & Supervisor

Corrective Action

Corrective Action: Submit for Re-Prep
Department Manager Approval: Renee Gallegos
Approval Date: 10/30/2009
Corrective Action Comments:

Workorders Affected

Workorder -- Procedure		Approved By	Approval Date
0909294 -- ThISO	No client contact information.	Amy R. Wolf	10/30/2009

Associated Batches

The samples were originally associated with the following Batch(es):

AS091022-2 created on 10/22/2009

All rework was completed in the following Batch(es):

AS091030-2A created on 11/3/2009
Outcome: All data quality objectives have been met on the reprep.
Outcome Approved By: Renee Gallegos
Approved on: 11/03/2009

NCR Approval

Project Manager Approval: ARW on 11/6/2009

Department Manager Approval: Renee Gallegos on 10/30/2009
QA Manager Approval: Deb Scheib on 11/8/2009

Date Printed: Thursday, November 12, 2009

ALS USA, Corp
Part of the ALS Laboratory Group
225 Commerce Drive Ft. Collins, Colorado 80524
Phone (970) 490-1511 Fax (970) 490-1522 www.alsenviro.com
A Campbell Brothers Limited Company

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

Isotopic Uranium

Case Narrative

Tetra Tech MM, Inc.

Ross Adams

Work Order Number: 0909294

1. This report consists of the analytical results for two water samples received by ALS on 09/28/2009.

2. These samples were prepared according to procedures SOP776R11 and SOP778R13. Modifications were made to the method as described on QASS #374662.

3. The samples were analyzed for the presence of isotopic uranium according to procedure SOP714R11. The analyses were completed on 10/28/2009.

4. The analysis results for these samples are reported in units of pCi/L. The samples were filtered and preserved prior to analysis.

5. This analytical method quantifies U-235 alpha activity in a specific region of interest corresponding to emission energies between those of U-234 and U-238. A potential limitation of this method is that measurable amounts of U-234 in the sample may cause a small amount of characteristic activity in the U-235 region of interest due to poorly resolved alpha activity at the boundary between the two regions. To minimize the potential for a high bias in the U-235 analytical results, the U-235 region of interest has been narrowed and limited to a lower energy region. An 85.1% abundance correction has been made to the final U-235 results.

6. The tracer yield for sample 0909294-7 is below the lower control limit of 30% at 18.2%. This sample is flagged with an “Y2” flag on the final reports. In addition, the requested MDC of 0.2 pCi/L was not met for U-235 for sample 0909294-7. This sample is identified with an “M” flag on the final reports. Spectral quality is adequate for accurate quantification. The results are submitted without further qualification. Please refer to NCR #11684.

7. The requested MDC of 0.2 pCi/L was not met for U-234 and U-235 for sample 0909294-7. The reported activity for this sample is greater than the achieved MDC. This sample is identified with an “M3” flag on the final reports.

8. No further anomalous situations were encountered during the preparation or analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Jean Anderson
Radiochemistry Primary Data Reviewer

11/12/09
Date

Radiochemistry Final Data Reviewer

11/12/09
Date

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0909294
Client Name: Tetra Tech MM, Inc.
Client Project Name: Ross Adams
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
300L-SW-01-D	0909294-1		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-2		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-3		WATER	23-Sep-09	15:35
900L-SW-01-B	0909294-4		WATER	23-Sep-09	16:05
900L-SW-01-C	0909294-5		WATER	23-Sep-09	16:35
900L-SW-01-D	0909294-6		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-7		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-8		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-9		WATER	24-Sep-09	11:15
300L-SW-01E	0909294-10		WATER	23-Sep-09	11:11
900L-SW-01-A	0909294-11		WATER	23-Sep-09	15:30
900L-SW-02-A	0909294-12		WATER	23-Sep-09	15:30
900L-SW-01-B	0909294-13		WATER	23-Sep-09	16:05
900L-SW-01-D	0909294-14		WATER	23-Sep-09	16:35
900L-SW-01-C	0909294-15		WATER	24-Sep-09	9:48
900L-SW-01-E	0909294-16		WATER	24-Sep-09	10:15
900L-SW-01-F	0909294-17		WATER	24-Sep-09	10:40
700L-SW-01-B	0909294-18		WATER	24-Sep-09	11:15

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 4 of 8

Lab ID 0909294

Project Name/No.

Sampler(s) LM, WB

Turnaround Standard or Due

Disposal By Lab or Return to Client

REPORT TO:
PHONE:
FAX:
E-MAIL:
COMPANY:
ADDRESS:

Refer to Page 1

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS & TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM TOC
300L-SW-01-D	9/22	1647		W	HNO3	1																													X
300L-SW-01-D	9/22	1647		W	HNO3	2											X	X	X	X																
300L-SW-01-D	9/22	1647		W	-	4																X	X			X								X	
700L-SW-01-A	9/23	1013		W	HNO3	1																													X
700L-SW-01-A	9/23	1013		W	HNO3	2											X	X	X	X																
700L-SW-01-A	9/23	1013		W	-	4																X	X			X								X	
300L-SW-01-E	9/23	1111	(1)	W	HNO3	1																													X

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walt Bowles
Printed Name Walt Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Air
Printed Name
Date Time
Company

Received By: (2)
Signature
Printed Name Amy Wolf
Date 9/23/09 Time 1750
Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 5 of 8

Lab ID 0909294

Project Name/No.

REPORT TO:

PHONE:

FAX:

E-MAIL:

COMPANY:

ADDRESS:

Refer to Page 1

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl, SO4	Solids TDS, TSS	pH	Perchlorate	ALKALINITY	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222	RADIOCHEM	TDC
300L-SW-01-E	9/23	1111	1	W	HNO3	2											X	X	X	X	10																
300L-SW-01-E	9/23	1111	↓	W	—	4																X	X			X									X		
900L-SW-01-A	9/23	1530	2	W	HZSO4	1																														X	
900L-SW-01-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	11																
900L-SW-01-A	9/23	1530	↓	W	—	4																X	X			X									X		
900L-SW-02-A	9/23	1530	3	W	HZSO4	1																														X	
900L-SW-02-A	9/23	1530	↓	W	HNO3	2											X	X	X	X	12																

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (1)
Signature Alaska Air
Printed Name _____
Date _____ Time _____
Company _____

Received By: (2)
Signature Amy Wolf
Printed Name Amy Wolf
Date 9/25/09 Time 1750
Company ALS-FC

5

Originator: Retain pink page or a photocopy!

Form 2087 (5/19/09)

ALS Laboratory Group

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Chain-of-Custody

Date 9/24/09 Page 6 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due _____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	PCBs	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	Hexavalent Chromium	Inorganic Anions Cl,SO4	Solids TDS+TSS	pH	Perchlorate	Alkalinity
900L-SW-02-A	9/23	1530	3	W	–	4																X	X			X
900L-SW-01-B	9/23	1605	4	W	HZ SO4	1																				
900L-SW-01-B	9/23	1605	↓	W	HN O3	2											X	X	X	X	13					
900L-SW-01-B	9/23	1605	↓	W	–	4																X	X			X
900L-SW-01-C	9/23	1635	5	W	HZ SO4	1																				
900L-SW-01-C	9/23	1635	↓	W	HN O3	2											X	X	X	X	14					
900L-SW-01-C	9/23	1635	↓	W	–	4																X	X			X

Actinides	**Gamma Isotopes**	**Gross Alpha / Beta**	**Total Alpha-Emitting Radium**	**Radium 226**	**Radium 228**	**Strontium 90** (Total RadioSr)	**Tritium**	**Radon 222**	RADIOCHEM	ITC
									X	
										X
									X	
										X
									X	

Circle Analytical Method Above

Circle: Am / Cm / Pu / Th / U

E901.1 | SW9310 E900.0 | SW9315 E903.0 | E903.1 | SW9320 E904.0 | D5811 | E906.0 | SM7500Rn

SW8015B GRO DRO Other | SW8260C | SW8260C | SW8270D | SW8081A | SW8082 | SW8151A | SW8330 SW8330B SW8321 by LC/MS/MS | SW8260C SW8270D SW8081A SW8151A | SW6010B SW7470A | SW6010B 7470A/7471A E200.7 E245.1 | SW6010B 7470A/7471A E200.7 E245.1 | SW6020A E200.8 | SW6020A E200.8 | SW7196A Alkaline Digestion? Y / N | SW9056 E300.0 | TDS: E160.1 TSS: E160.2 Total: E160.3 | SW9040B SW9045C E150.1 | SW6850 by LC/MS/MS E314.0

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	
Signature	Walter Bowles
Printed Name	Walter Bowles
Date	9/26/09 Time 0733
Company	Tetra Tech FC

Relinquished By: (2)	
Signature	Alaska Air
Printed Name	
Date	Time
Company	

Received By: (1)	
Signature	Alaska Air
Printed Name	
Date	Time
Company	

Received By: (2)	
Signature	Amy Wolf
Printed Name	Amy Wolf
Date	9/26/09 Time 1750
Company	ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 7 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s): LM, WB

Turnaround: Standard or Due _____

Disposal: By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions Cl, F, SO4 SW9056 E300.0	Solids TDS, TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	Alkalinity	Actinides Circle: Am / Cm / Pu / Th / U	Gamma Isotopes E901.1	Gross Alpha / Beta SW9310 E900.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811	Tritium E906.0	Radon 222 SM7500Rn	Radioactivity	TOC
900L-SW-01-D	9/24	0948	6	W	HZ SO4	1																														X
900L-SW-01-D	9/24	0948	↓	W	HN O3	2											X	X	X	X	15															
900L-SW-01-D	9/24	0948	↓	W	—	4																X	X			X							X		
900L-SW-01-E	9/24	1015	7	W	HZ SO4	1																														X
900L-SW-01-E	9/24	1015	↓	W	HN O3	2											X	X	X	X	16															
900L-SW-01-E	9/24	1015	↓	W	—	4																X	X			X							X		
900L-SW-01-F	9/24	1040	8	W	HZ SO4	1																														X

* Zone (Circle): EST CST MST PST **Matrix:** O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By: (2)
Signature Walter Bowles	Signature Alaska Airlines
Printed Name Walter Bowles	Printed Name
Date 9/26/09 Time 0733	Date Time
Company Tetra Tech EC	Company

Received By: (1)	Received By: (2)
Signature Alaska Airlines	Signature CJ Wolf
Printed Name	Printed Name Amy Wolf
Date Time	Date 9/28/09 Time 1750
Company	Company ALS-FC

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 9/24/09 Page 8 of 8

Lab ID 0909294

Project Name/No.	
REPORT TO:	Refer to Page 1
PHONE:	
FAX:	
E-MAIL:	
COMPANY:	
ADDRESS:	

Sampler(s) LM, WB

Turnaround Standard or Due ____

Disposal By Lab or Return to Client

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	TPH SW8015B GRO DRO Other	VOCs SW8260C	BTEX + MtBE SW8260C	SVOCs SW8270D	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330 SW8330B SW8321 by LC/MS/MS	TCLP Organics SW1311 SW8260C SW8270D SW8081A SW8151A	TCLP Metals SW1311 SW6010B SW7470A	Total Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Dissolved Metals (ICP) or Hg SW6010B 7470A/7471A E200.7 E245.1	Total Metals (ICP-MS) SW6020A E200.8	Dissolved Metals (ICP-MS) SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digestion? Y / N	Inorganic Anions(La SO4) SW9056 E300.0	Solids TDS+TSS TDS: E160.1 TSS: E160.2 Total: E160.3	pH SW9040B SW9045C E150.1	Perchlorate SW6850 by LC/MS/MS E314.0	ALKALINITY	Actinides Circle: Am / Cm / Pu / Th / U E901.1	Gamma Isotopes SW9310 E900.0	Gross Alpha / Beta SW9315 E903.0	Total Alpha-Emitting Radium E903.1	Radium 226 SW9320 E904.0	Radium 228 D5811	Strontium 90 (Total RadioSr) E906.0	Tritium SM7500Rn	Radon 222	RADIOCHEM	TDS
900L-SW-01-F	9/24	1040	(8)	W	HNO3	2											X	X	X	X	(17)														
900L-SW-01-F	9/24	1040	↓	W	-	4																X	X			X								X	
700L-SW-01-B	9/24	1115	(9)	W	HZSO4	1																													X
700L-SW-01-B	9/24	1115	↓	W	HNO3	2											X	X	X	X	(19)														
700L-SW-01-B	9/24	1115	↓	W	-	4																X	X			X								X	

* Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analyte list below.

Comments: Refer to Page 1

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)
Signature Walter Bowles
Printed Name Walter Bowles
Date 9/26/09 Time 0733
Company Tetra Tech EC

Relinquished By: (2)
Signature Alaska Airlines
Printed Name
Date Time
Company

Received By: (1)
Signature Alaska Airlines
Printed Name
Date Time
Company

Received By: (2)
Signature Cwolf
Printed Name Amy Wolf
Date 9/28/09 Time 1750
Company ALS-FC

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Tetra Tech Workorder No: 0909294

Project Manager: AW Initials: WJO Date: 9/29/09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		YES	(NO) ★
7	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO) •
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		YES	(NO) +
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	(N/A)	YES	NO
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1	2	3	4	5			
Temperature (°C):	4.8	2.8	1.2	2.2	1.4			
No. of custody seals on cooler:	2	2	2	2	2			
DOT Survey/ Acceptance Information — External µR/hr reading:	14	15	15	14	18			
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16

★ Sample #3 (900L-SW-02-A) Sample time on bottle ID labels is 1535.

• The 1 gal cubes for RAD analysis were received unpreserved. Samples will be filtered and preserved in house.

+ The lid for 1 of 2 1 gal cubes for sample #4 (900L-SW-01-B) was loose and leaking upon receipt. No significant sample loss. PM notified.

If applicable, was the client contacted? (YES) / NO / NA Contact: Tymeri Schleicher Date/Time: 10/12/09 e-mail

Project Manager Signature / Date: 10/12/09

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

027 KTN 7318 4160 0909294 027-7318 4160

Shipper's Name and Address
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011
USA
Tel: 5365938711

Ti jqqf st !Bddpvou Ovn cf s
27442321321

Dvt upn f st !JE!Ovn cf s
22651

Not Negotiable
Air Waybill
Jt tvf e!Cz

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR
P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

Consignee's Name and Address
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424
USA
Tel: 911.554.2622

Dpot jhof f (t !Bddpvou Ovn cf s

Bmp!opvjgz
Uf m

Issuing Carrier's Agent and City

Bddpvoujoh!Jogpsn bujpo
22651
Uf usb!Uf di !FD!Jbd
2: 914!O!Dsf f l !Qbsl x bz
Cpui f mtX B!: 9122
VTB

SRN/1048447
HpreTusf bl

Bhf out !JBUB!Dpef

Bddpvou Op/

BjsqpsuJpgEf qbsuvsf !)Bees'!pgGjstuDbssjf s'!boe!Sf r vf t uf e!Spvujoh
Ketchikan

Up Cz!GjstuDbssjf s	Up!0Cz	Up!0Cz	Dvssf odz	X U0WBM	Pui f s	Ef dmbsf e!Wbmvf !Gps!Dbssjbhf	Ef dmbsf e!Wbmvf !Gps!Dvt upn t
SEA Alaska Airlines	DEN	AS	USD PX	X	X	NVD	NCV

BjsqpsuJpgEf t ujobujpo	Gjhi uEbuf	Gjhi uEbuf	Bn pvoupg.bt vsbodf
Denver	AS 062/27	AS 678/27	XXX

I boenjoh!Jogpsn bujpo
KEEP COOL
NOA 1-800-443-1511

TDJ

Op!pg Qjf df t	Hspt t X f jhi u	h ro	Dpn n pejuz Jtf n !Op/	Di bshf bcmf X f jhi u	Sbuf !0 Di bshf	Upubm	Obuvsf !boe!Rvboujuz!pg!Hppet)bdnfEjn f ot jpot !ps!Wpmvn f *
10	654.0	L	Q	654.0	1.47	961.38	ENVIORNMENTAL SAMPLS Dims: 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x15 x 1 23 x 14 x16 x 1 GSX PER 23 x 14 x16 x 1 25 x 19 x15 x 1 Volume: 30.280 23 x 14 x16 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1 25 x 14 x14 x 1
10	654.0					961.38	

Prepaid	X f jhi u Di bshf	Collect
	961.38	

Wbmvbujpo!Di bshf

Uby
33.88

Pui f s Di bshf t

MYC 52.32
SCC 13.08

UpubmPui f s Di bshf t !Evf !Bhf ou

UpubmPui f s Di bshf t !Evf !Dbssjf s
65.40

Ti jqqf s df sujgf t !u bu u f !qbsujdvmbst !po!u f !gbdf !i f sf pgbsf !dpssf du boe!u bu **insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.**

For: Tetra Tech EC Inc

Tjhobuvsf !pd Ti jqqf s sfsi it !Bhf ou

WB

U JT!TI JQNFOU!EPFT!OPU DPOUBJO EBOHFSPVT!HPPET

U JT!TI JQNFOU!EPFT!DPOUBJO EBOHFSPVT!HPPET

UpubmQsf qbje
1,060.66

UpubmDpmmdu

38!Tf q!311: 21;54 Ketchikan Alaska Airlines

Fyf dvuf e!Po!)Ebuf * bu)Qbdf * Tjhobuvsf !pg.Jt vjoh!Dbssjf s!sfsjju !Bhf ou

027-7318 4160

0909294

Alaska Air Cargo
ALASKA AIRLINES & HORIZON AIR

P.O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER
Tetra Tech EC Inc
19803 N Creek Parkway
Bothell, WA 98011

CONSIGNEE
ALS/ Paragon
225 Commerce Dr.
Ft. Collins, CO 805424

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-73184160	10	654.0 Lb	KTN-DEN	ENVIORNMENTAL	AS 678 27-Sep-2009	

Storage Locations:

LOCAL CHARGES :

Bonded Warehouse ☐

Total Local Charges:	USD	0.00
VAT 3.30%:	USD	0.00
Grand Total:	USD	**0.00**

PO Number

RECEIPT STATEMENT

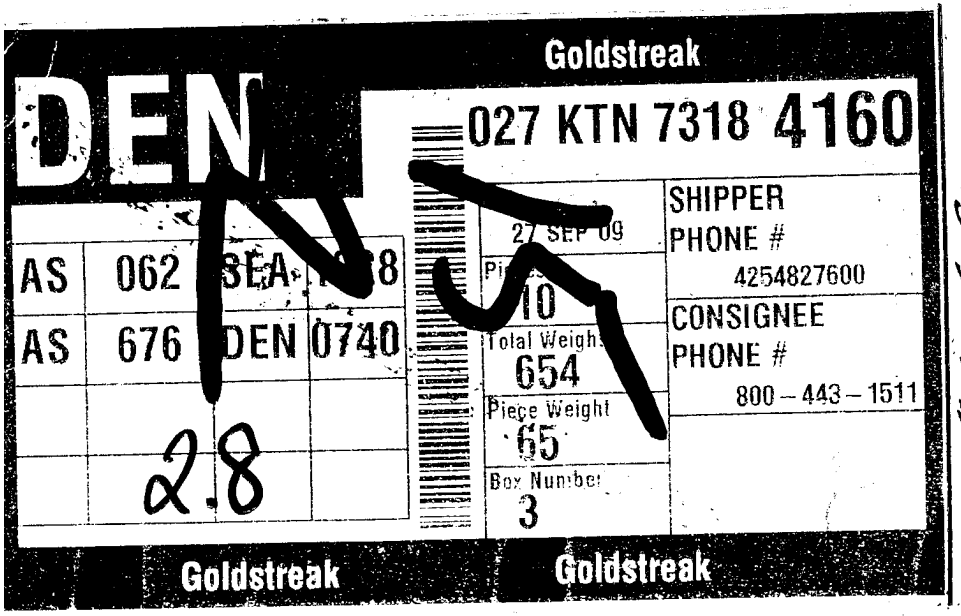
The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 28-Sep-2009
Time: 17:50
Driver: Paragon
Registration:
Signature:

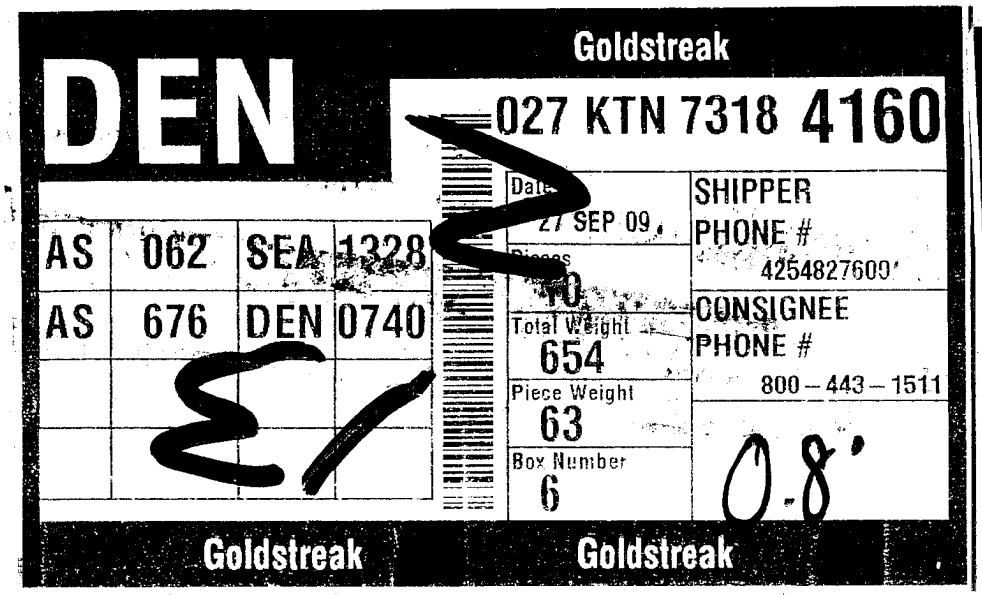

Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.4
Date
27 SEP
Pieces
10
Total Weight
654
Piece Weight
66
Box Number
8
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.8
Date
27 SEP 09
Pieces
10
Piece Weight
65
Box Number
10
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
2.8
27 SEP 09
Total Weight
654
Piece Weight
65
Box Number
3
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
4.2
Date
27 SEP 09
Pieces
10
Piece Weight
64
Box Number
9
SHIPPER
PHONE #
4254827600
CONSIGNEE
PHONE #
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 63
Box Number 6
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.8
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 58
Box Number 4
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
0.6
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com

0909294


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN
Date 27 SEP 09
Pieces 10
Box Numb 1
SHIPPER PHONE # 4254827600
CONSIGNEE PHONE # 800-443-1511
1.2
Goldstreak Goldstreak


Goldstreak
DEN
027 KTN 7318 4160
AS 062 SEA 1328
AS 676 DEN 0740
Date 27 SEP 09
Pieces 10
Total Weight 654
Piece Weight 67
Box Number 2
SHIPPER
CONSIGNEE PHONE #
800-443-1511
2.2
Goldstreak Goldstreak
Alaska Air Cargo
www.alaskaair.com


DEN
Goldstreak
027 KTN 7318 4160
AS 062 SEA 1328
AS DEN 0740
Date
27 SEP
Pieces
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Piece Weight
63
Box Number
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SHIPPER
PHONE #
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CONSIGNEE
PHONE #
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Alaska Air Cargo
www.alaskaair.com

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DEN
Goldstreak
027 KTN 7218 4160
AS 062 SEA 1328
AS 676 DEN 0740
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Date
27 SEP 09
Pieces
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Total Weight
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Box Number
7
PHONE #
4254827600
800 – 443 – 1511
Goldstreak
Goldstreak
Alaska Air Cargo
www.alaskaair.com

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Method Blank Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AS091022-1MB

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 22-Oct-09
Date Prepared: 22-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: AS091022-1
QCBatchID: AS091022-1-1
Run ID: AS091022-1A
Count Time: 1000 minutes

Final Aliquot: 500 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	0.022 +/- 0.026	0.040	0.2	U
15117-96-1	U-235	0 +/- 0.022	0.032	0.2	U
7440-61-1	U-238	0.011 +/- 0.018	0.028	0.2	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	8.800	7.6	pCi/l	86.2	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *UR0909294-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Laboratory Control Sample(s)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Lab ID: AS091022-1LCS

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 22-Oct-09
Date Prepared: 22-Oct-09
Date Analyzed: 26-Oct-09

Prep Batch: AS091022-1
QCBatchID: AS091022-1-1
Run ID: AS091022-1A
Count Time: 300 minutes

Final Aliquot: 500 ml
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13966-29-5	U-234	8.5 +/- 1.6	0.1	8.68	97.5	82 - 122	P
7440-61-1	U-238	9.0 +/- 1.7	0.1	9.01	99.6	82 - 122	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	8.801	7.0	pCi/l	79.1	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *UR0909294-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Duplicate Sample Results (DER)

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7DUP

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 24-Sep-09
Date Prepared: 22-Oct-09
Date Analyzed: 26-Oct-09

Prep Batch: AS091022-1
QCBatchID: AS091022-1-1
Run ID: AS091022-1A
Count Time: 300 minutes
Report Basis: Filtered

Final Aliquot: 500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Analyte	Sample			Duplicate			DER	Control Limit
		Result +/- 2 s TPU	MDC	Qualifiers	Result +/- 2 s TPU	MDC	Qualifiers		
13966-29-5	U-234	1.78 +/- 0.50	0.33	Y2,M3	1.79 +/- 0.48	0.05		0.01	2.13
15117-96-1	U-235	0.04 +/- 0.12	0.22	Y2,U,M	0.15 +/- 0.12	0.11	LT	0.63	2.13
7440-61-1	U-238	1.50 +/- 0.46	0.36	Y2,M3	1.21 +/- 0.37	0.14		0.50	2.13

Comments: This sample was filtered prior to analysis.

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *UR0909294-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-E
Lab ID: 0909294-7

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 24-Sep-09
Date Prepared: 22-Oct-09
Date Analyzed: 28-Oct-09

Prep Batch: AS091022-1
QCBatchID: AS091022-1-1
Run ID: AS091022-1A
Count Time: 1000 minutes
Report Basis: Filtered

Final Aliquot: 500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	1.78 +/- 0.50	0.33	0.2	Y2,M3
15117-96-1	U-235	0.04 +/- 0.12	0.22	0.2	Y2,U,M
7440-61-1	U-238	1.50 +/- 0.46	0.36	0.2	Y2,M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	8.800	1.60	pCi/l	18.2	30 - 110 %	Y2

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *UR0909294-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Duplicate Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID:	900L-SW-01-E
Lab ID:	0909294-7DUP

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 24-Sep-09
Date Prepared: 22-Oct-09
Date Analyzed: 26-Oct-09

Prep Batch: AS091022-1
QCBatchID: AS091022-1-1
Run ID: AS091022-1A
Count Time: 300 minutes
Report Basis: Filtered

Final Aliquot: 500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	1.79 +/- 0.48	0.05	0.2	
15117-96-1	U-235	0.15 +/- 0.12	0.11	0.2	LT
7440-61-1	U-238	1.21 +/- 0.37	0.14	0.2	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	8.801	4.90	pCi/l	55.7	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

W - DER is greater than Warning Limit of 1.42

D - DER is greater than Control Limit of 2.13

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *UR0909294-1*

Isotopic Uranium By Alpha Spectroscopy

PAI 714 Rev 11

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0909294
Client Name: Tetra Tech MM, Inc.
ClientProject ID: Ross Adams

Field ID: 900L-SW-01-F
Lab ID: 0909294-8

Sample Matrix: WATER
Prep SOP: PAI 778 Rev 13
Date Collected: 24-Sep-09
Date Prepared: 22-Oct-09
Date Analyzed: 26-Oct-09

Prep Batch: AS091022-1
QCBatchID: AS091022-1-1
Run ID: AS091022-1A
Count Time: 300 minutes
Report Basis: Filtered

Final Aliquot: 500 ml
Prep Basis: Filtered
Moisture(%): NA
Result Units: pCi/l
File Name: Spectrum #1

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13966-29-5	U-234	28.0 +/- 5.0	0.2	0.2	
15117-96-1	U-235	1.49 +/- 0.42	0.10	0.2	
7440-61-1	U-238	25.6 +/- 4.6	0.2	0.2	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
U-232	8.801	5.76	pCi/l	65.4	30 - 110 %	

Comments: This sample was filtered prior to analysis.

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *UR0909294-1*

NCR #: 11684

CONTROLLED
NON-CONFORMANCE REPORT

Non-Conformance

Initiated By: Erin M. Finsley on 10/29/2009

Event Type: Lab QC Criteria Not Met -- Tracer Yield

Event Explanation: The tracer yield for sample 0909294-7 is below the LCL of 30% at 18.2%. The requested MDC was not met for U-235 for this sample. Spectral quality is adequate for quantification.

Action To Prevent Reccurence: Discussion with supervisor and analyst

Corrective Action

Corrective Action: Document in Narrative
Department Manager Approval: Renee Gallegos
Approval Date: 10/30/2009
Corrective Action Comments:

Workorders Affected

Workorder -- Procedure		Approved By	Approval Date
0909294 -- UISO	No client contact information.	Amy R. Wolf	10/30/2009

Associated Batches

The samples were originally associated with the following Batch(es):

AS091022-1A created on 10/29/2009

All rework was completed in the following Batch(es):

Not Applicable

NCR Approval

Project Manager Approval: DAS on 10/31/2009
Department Manager Approval: Renee Gallegos on 10/30/2009
QA Manager Approval: Deb Scheib on 10/31/2009

Date Printed: Thursday, November 12, 2009

ALS USA, Corp
Part of the ALS Laboratory Group
225 Commerce Drive Ft. Collins, Colorado 80524
Phone (970) 490-1511 Fax (970) 490-1522 www.alsenviro.com
A Campbell Brothers Limited Company

QUALITY ASSURANCE SUMMARY SHEET

PAR W.O. # / BATCH 0909294
TEST various
METHOD Prep
SOP/REV (PREP) _____
SOP/REV (ANAL) _____

Briefly document any QA or other problems or deviations associated with the analysis of samples. Problems could result from: log-in, color, odor, dilution, consistency, scheduling, equipment, or instrumentation, or may include documentation of minor deviations necessary due to unique DQO's or sample characteristics.

10/20/09

10/20/09

Samples 0909294-1 through -9 were received unfiltered and unpreserved. Per client instructions the samples were filtered through 0.45 µm vacuum filter and preserved to a pH below 2 with 1 mL of concentrated HNO_3. The samples were stored for 24 hours and a pH below 2 was reverified prior to sample analysis.

10/20/09

10/20/09

10/20/09

TECHNICIAN/ANALYST _____ DATE 10/20/09

DEPARTMENT MANAGER _____ DATE 10/20/09

374662

FORM 302r6.doc (4/22/04)

Radon Monitoring Report

TETRA TECH
ATTN: AARON ORECHWA
3801 AUTOMATION WAY
FORT COLLINS, CO 80525

Acct. No. 0410287

LANDAUER

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586
Telephone: (800) 528-8327 Facsimile: (708) 755-7048

Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	
4785619	DRNF	08-JUN-09	23-SEP-09	DOT-RAD-6 (LOOSE TRACK ETC. CHIP INSIDE DETECTOR HOUSING),	72.5 ±7.29	0.7 ±0.07	
4785620	DRNF	08-JUN-09	23-SEP-09	* - LESS THAN INDICATED VALUE DOT-RAD-7(LOOSE TRACK ETCH CHIP INSIDE DETECTOR HOUSING	* 30.0	* 0.3 ±0.04	
4785833	DRNF	09-JUN-09	23-SEP-09	MR-RAD-27	235.5 ±14.6	2.2 ±0.14	
4785834	DRNF	09-JUN-09	23-SEP-09	300L-RAD-28	618.7 ±24.6	5.8 ±0.23	
4785835	DRNF	09-JUN-09	23-SEP-09	EXCEEDS MAX 140.000 PCI/L-DA 300L-RAD-29			
4785836	DRNF	09-JUN-09	23-SEP-09	300L-RAD-30	14422.5 ±369.9	136.1 ±3.5	
4785837	DRNF	10-JUN-09	23-SEP-09	300L-RAD-31	2247.0 ±48.8	21.4 ±0.46	
4785838	DRNF	10-JUN-09	23-SEP-09	300L-RAD-32	1535.9 ±39.8	14.6 ±0.38	
4785839	DRNF	10-JUN-09	23-SEP-09	300L-RAD-33	2345.5 ±49.9	22.3 ±0.48	
①	②	③	④	⑤	⑥	⑦	⑧

RESULTS RELATED ONLY TO MONITORS AS RECEIVED BY LANDAUER.

Q.C. Release	Process No.	Report Date	Date Received
DRB	A21742	08-OCT-09	29-SEP-09

Radon Monitoring Report

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4785840	DRNF	10-JUN-09	23-SEP-09	300L-RAD-34	8010.5 ±261.3	76.3 ±2.49	
4785847	DRNF	09-JUN-09	23-SEP-09	900L-RAD-25	1710.6 ±42.2	16.1 ±0.40	
4785848	DRNF	09-JUN-09	23-SEP-09	900L-RAD-24	165.5 ±12.0	1.6 ±0.11	
4785849	DRNF	09-JUN-09	23-SEP-09	OP-RAD-18	1769.6 ±42.9	16.7 ±0.41	
4785850	DRNF	09-JUN-09	24-SEP-09	OP-RAD-17	39886.2 ±701.2	372.8 ±6.6	
4785851	DRNF	09-JUN-09	22-SEP-09	OP-RAD-16	17144.7 ±411.0	163.3 ±3.9	
4785859	DRNF	08-JUN-09	23-SEP-09	OSA-RAD-1	9935.3 ±296.2	92.9 ±2.77	
4785861	DRNF	08-JUN-09	23-SEP-09	OSA-RAD-3	350.9 ±18.2	3.3 ±0.17	
4785863	DRNF	08-JUN-09	23-SEP-09	OSA-RAD-2/TORN/SEPARATE BAG	226.4 ±14.3	2.1 ±0.13	
4785864	DRNF	08-JUN-09	23-SEP-09	OSA-RAD-4	6861.1 ±239.0	64.1 ±2.23	
①	②	③	④	⑤	⑥	⑦	⑧

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DRB	A21742	08-OCT-09	29-SEP-09

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Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	
4785865	DRNF	08-JUN-09	23-SEP-09	OSA-RAD-5	130.0 ±10.4	1.2 ±0.10	
4785866	DRNF	09-JUN-09	23-SEP-09	700L-RAD-11	220.3 ±14.1	2.1 ±0.13	
4785867	DRNF	09-JUN-09	23-SEP-09	700L-RAD-12	1165.7 ±34.4	11.0 ±0.32	
4785868	DRNF	09-JUN-09	23-SEP-09	700L-RAD-13	2363.9 ±50.1	22.3 ±0.47	
4785869	DRNF	09-JUN-09	23-SEP-09	700L-RAD-14	4252.0 ±69.0	40.1 ±0.65	
4785870	DRNF	09-JUN-09	23-SEP-09	700L-RAD-15	835.0 ±28.8	7.9 ±0.27	
4785871	DRNF	09-JUN-09	23-SEP-09	OP-RAD-19	4158.0 ±68.2	39.2 ±0.64	
4785872	DRNF	09-JUN-09	23-SEP-09	900L-RAD-20	20350.4 ±456.9	192.0 ±4.3	
4785874	DRNF	09-JUN-09	23-SEP-09	900L-RAD-21	270.2 ±15.8	2.5 ±0.15	
4785875	DRNF	09-JUN-09	23-SEP-09	900L-RAD-22	14135.2 ±365.5	133.4 ±3.4	
①	②	③	④	⑤	⑥	⑦	⑧

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Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	
4785876	DRNF	09-JUN-09	23-SEP-09	EXCEEDS MAX 140,000 PCI/L-DA 900L-RAD-23			
①	②	③	④	⑤	⑥	⑦	⑧

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DRB	A21742	08-OCT-09	29-SEP-09