Quanterra Incorporated
4955 Yarrow Street
Arvada, Colorado 80002

303 421-6611 Telephone
303 431-7171 Fax

RECEIVED
JUN 04 1999
BY: U. Goldade

SDMS Document ID
2040353

ANALYTICAL REPORT

Vasquez & I-70

Lot #: D9D100118

Gerald Almquist

Roy F. Weston, Inc.

QUANTERRA INCORPORATED

Ellen La Riviere
Ellen La Riviere
Project Manager

May 5, 1999

Table Of Contents

Standard Deliverables With Supporting Documentation

Section	Report Contents	Number of Pages
	Standard Deliverables	
A.	**Introduction**	135
	• Table of Contents	
	• Case Narrative	
	• Executive Summary – Detection	
	• Analytical Methods Summary	
	• Method/Analyst Summary	
	• Lot Sample Summary	
	• Analytical Results by Sample	
	• QC Data Association Summary	
	• Chain-of-Custody	
	Supporting Documentation	
	[Please Note: A one-page "Description of Supporting Documentation" is provided in the Supporting Documentation section(s).]	
B.	• Volatile GC/MS	
C.	• Semivolatile GC/MS	
D.	• Volatile GC	
E.	• Semivolatile GC	
F.	• LC/MS or HPLC	
G.	• Metals	
H.	• General Chemistry	
I.	• Subcontracted Data	
	Total # Pages in this Package	

Project Narrative

(D9D100118)

Inorganic Analysis

Recoveries for beryllium, iron, and magnesium in the LCS associated with the Method 6010B batch 9103164 were above the QC control limits. Recoveries for beryllium and magnesium in the MS/MSD pair were in-control, however, iron recoveries could not be determined since the concentration of iron in the parent sample (D9D100118-002) was greater than four times the spike amount. The samples could not be re-prepped due to insufficient sample volume.

Due to laboratory error, sample duplicates were not digested with the Method 6010B or 6020 test batches. The client was contacted on April 21ST and agreed to accept the data.

The MS/MSD analyzed with the mercury QC batch 9102157 exceeded the instrument's linear range. The LCS/LCSD is provided to demonstrate batch precision.

EXECUTIVE SUMMARY - Detection Highlights

D9D100118

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-253 04/01/99 08:26 001				
Silver	0.58	0.010	mg/kg	SW846 6020
Barium	339	0.50	mg/kg	SW846 6020
Cobalt	5.6	0.10	mg/kg	SW846 6020
Chromium	16.7	0.10	mg/kg	SW846 6020
Manganese	325	0.10	mg/kg	SW846 6020
Nickel	10.4	0.10	mg/kg	SW846 6020
Selenium	1.5	0.50	mg/kg	SW846 6020
Thallium	0.49	0.10	mg/kg	SW846 6020
Vanadium	16.5	0.50	mg/kg	SW846 6020
Mercury	2.9	0.16	mg/kg	SW846 7471A
Aluminum	9770	5.0	mg/kg	SW846 6010B
Arsenic	1360	10.0	mg/kg	SW846 6010B
Beryllium	0.83	0.20	mg/kg	SW846 6010B
Calcium	8830	10.0	mg/kg	SW846 6010B
Cadmium	11.1	0.50	mg/kg	SW846 6010B
Copper	71.4	2.0	mg/kg	SW846 6010B
Iron	17300	10.0	mg/kg	SW846 6010B
Potassium	3080	500	mg/kg	SW846 6010B
Magnesium	2930	5.0	mg/kg	SW846 6010B
Lead	1520	5.0	mg/kg	SW846 6010B
Antimony	8.1	6.0	mg/kg	SW846 6010B
Zinc	410	2.0	mg/kg	SW846 6010B
ND-98-782 04/01/99 08:26 002				
Silver	0.44	0.010	mg/kg	SW846 6020
Barium	155	0.10	mg/kg	SW846 6020
Cobalt	3.8	0.10	mg/kg	SW846 6020
Chromium	21.0	0.10	mg/kg	SW846 6020
Manganese	186	0.10	mg/kg	SW846 6020
Nickel	9.7	0.10	mg/kg	SW846 6020
Selenium	4.5	0.50	mg/kg	SW846 6020
Thallium	0.63	0.10	mg/kg	SW846 6020
Vanadium	20.9	0.50	mg/kg	SW846 6020
Mercury	11.4	0.99	mg/kg	SW846 7471A
Aluminum	7870	25.0	mg/kg	SW846 6010B
Arsenic	8890	50.0	mg/kg	SW846 6010B
Beryllium	0.85 B	1.0	mg/kg	SW846 6010B
Calcium	6540	50.0	mg/kg	SW846 6010B
Cadmium	12.5	2.5	mg/kg	SW846 6010B
Copper	42.5	10.0	mg/kg	SW846 6010B
Iron	14500	10.0	mg/kg	SW846 6010B
Potassium	2440	500	mg/kg	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9D100118

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-782 04/01/99 08:26 002				
Magnesium	2670	25.0	mg/kg	SW846 6010B
Lead	1870	25.0	mg/kg	SW846 6010B
Antimony	42.2	30.0	mg/kg	SW846 6010B
Zinc	278	10.0	mg/kg	SW846 6010B
ND-98-292 04/01/99 08:26 003				
Silver	0.30	0.010	mg/kg	SW846 6020
Barium	124	0.10	mg/kg	SW846 6020
Cobalt	3.5	0.10	mg/kg	SW846 6020
Chromium	22.8	0.10	mg/kg	SW846 6020
Manganese	170	0.10	mg/kg	SW846 6020
Nickel	7.1	0.10	mg/kg	SW846 6020
Selenium	0.65	0.50	mg/kg	SW846 6020
Thallium	0.31	0.10	mg/kg	SW846 6020
Vanadium	13.4	0.50	mg/kg	SW846 6020
Mercury	0.23	0.033	mg/kg	SW846 7471A
Aluminum	6650	5.0	mg/kg	SW846 6010B
Arsenic	151	10.0	mg/kg	SW846 6010B
Beryllium	0.56	0.20	mg/kg	SW846 6010B
Calcium	2690	10.0	mg/kg	SW846 6010B
Cadmium	4.4	0.50	mg/kg	SW846 6010B
Copper	19.7	2.0	mg/kg	SW846 6010B
Iron	12400	10.0	mg/kg	SW846 6010B
Potassium	1960	500	mg/kg	SW846 6010B
Magnesium	2020	5.0	mg/kg	SW846 6010B
Lead	219	5.0	mg/kg	SW846 6010B
Antimony	2.3 B	6.0	mg/kg	SW846 6010B
Zinc	151	2.0	mg/kg	SW846 6010B
ND-98-640 04/01/99 08:26 004				
Silver	0.79	0.010	mg/kg	SW846 6020
Barium	125	0.10	mg/kg	SW846 6020
Cobalt	3.8	0.10	mg/kg	SW846 6020
Chromium	8.6	0.10	mg/kg	SW846 6020
Manganese	188	0.10	mg/kg	SW846 6020
Nickel	6.7	0.10	mg/kg	SW846 6020
Selenium	0.31 B	0.50	mg/kg	SW846 6020
Thallium	0.20	0.10	mg/kg	SW846 6020
Vanadium	13.5	0.50	mg/kg	SW846 6020
Mercury	0.15	0.033	mg/kg	SW846 7471A
Aluminum	7610	5.0	mg/kg	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9D100118

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-640 04/01/99 08:26 004				
Arsenic	127	10.0	mg/kg	SW846 6010B
Beryllium	0.68	0.20	mg/kg	SW846 6010B
Calcium	2150	10.0	mg/kg	SW846 6010B
Cadmium	1.6	0.50	mg/kg	SW846 6010B
Copper	28.5	2.0	mg/kg	SW846 6010B
Iron	15900	10.0	mg/kg	SW846 6010B
Potassium	2410	500	mg/kg	SW846 6010B
Magnesium	2100	5.0	mg/kg	SW846 6010B
Lead	171	5.0	mg/kg	SW846 6010B
Zinc	86.1	2.0	mg/kg	SW846 6010B
ND-98-627 04/01/99 08:26 005				
Silver	1.1	0.010	mg/kg	SW846 6020
Barium	157	0.10	mg/kg	SW846 6020
Cobalt	4.7	0.10	mg/kg	SW846 6020
Chromium	55.5	0.10	mg/kg	SW846 6020
Manganese	302	0.10	mg/kg	SW846 6020
Nickel	9.8	0.10	mg/kg	SW846 6020
Selenium	0.92	0.50	mg/kg	SW846 6020
Thallium	0.43	0.10	mg/kg	SW846 6020
Vanadium	15.3	0.50	mg/kg	SW846 6020
Mercury	0.93	0.16	mg/kg	SW846 7471A
Aluminum	8730	5.0	mg/kg	SW846 6010B
Arsenic	584	10.0	mg/kg	SW846 6010B
Beryllium	0.73	0.20	mg/kg	SW846 6010B
Calcium	5720	10.0	mg/kg	SW846 6010B
Cadmium	7.6	0.50	mg/kg	SW846 6010B
Copper	40.3	2.0	mg/kg	SW846 6010B
Iron	16600	10.0	mg/kg	SW846 6010B
Potassium	1980	500	mg/kg	SW846 6010B
Magnesium	3150	5.0	mg/kg	SW846 6010B
Lead	1230	5.0	mg/kg	SW846 6010B
Antimony	2.4 B	6.0	mg/kg	SW846 6010B
Zinc	261	2.0	mg/kg	SW846 6010B
ND-98-549 04/01/99 08:26 006				
Silver	0.80	0.010	mg/kg	SW846 6020
Barium	189	0.10	mg/kg	SW846 6020
Cobalt	5.4	0.10	mg/kg	SW846 6020
Chromium	21.0	0.10	mg/kg	SW846 6020
Manganese	346	0.10	mg/kg	SW846 6020

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9D100118

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-549 04/01/99 08:26 006				
Nickel	9.0	0.10	mg/kg	SW846 6020
Selenium	2.6	0.50	mg/kg	SW846 6020
Thallium	0.33	0.10	mg/kg	SW846 6020
Vanadium	15.7	0.50	mg/kg	SW846 6020
Mercury	6.6	0.99	mg/kg	SW846 7471A
Aluminum	9520	5.0	mg/kg	SW846 6010B
Arsenic	1990	10.0	mg/kg	SW846 6010B
Beryllium	0.74	0.20	mg/kg	SW846 6010B
Calcium	7540	10.0	mg/kg	SW846 6010B
Cadmium	7.1	0.50	mg/kg	SW846 6010B
Copper	30.7	2.0	mg/kg	SW846 6010B
Iron	16200	10.0	mg/kg	SW846 6010B
Potassium	2640	500	mg/kg	SW846 6010B
Magnesium	2910	5.0	mg/kg	SW846 6010B
Sodium	648	500	mg/kg	SW846 6010B
Lead	743	5.0	mg/kg	SW846 6010B
Antimony	10.7	6.0	mg/kg	SW846 6010B
Zinc	3680	2.0	mg/kg	SW846 6010B
ND-98-1302 04/01/99 08:26 007				
Silver	0.63	0.010	mg/kg	SW846 6020
Barium	278	0.50	mg/kg	SW846 6020
Cobalt	4.9	0.10	mg/kg	SW846 6020
Chromium	36.4	0.10	mg/kg	SW846 6020
Manganese	320	0.10	mg/kg	SW846 6020
Nickel	12.1	0.10	mg/kg	SW846 6020
Selenium	5.2	0.50	mg/kg	SW846 6020
Thallium	0.68	0.10	mg/kg	SW846 6020
Vanadium	15.3	0.50	mg/kg	SW846 6020
Mercury	8.7	0.38	mg/kg	SW846 7471A
Aluminum	9950	25.0	mg/kg	SW846 6010B
Arsenic	9940	100	mg/kg	SW846 6010B
Beryllium	0.92 B	1.0	mg/kg	SW846 6010B
Calcium	9960	50.0	mg/kg	SW846 6010B
Cadmium	19.0	2.5	mg/kg	SW846 6010B
Copper	47.4	10.0	mg/kg	SW846 6010B
Iron	16400	10.0	mg/kg	SW846 6010B
Potassium	1800	500	mg/kg	SW846 6010B
Magnesium	3390	25.0	mg/kg	SW846 6010B
Sodium	264 B	500	mg/kg	SW846 6010B
Lead	3550	25.0	mg/kg	SW846 6010B
Antimony	54.4	30.0	mg/kg	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9D100118

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-1302 04/01/99 08:26 007				
Zinc	1060	10.0	mg/kg	SW846 6010B
ND-98-1273 04/01/99 08:26 008				
Silver	0.85	0.010	mg/kg	SW846 6020
Barium	330	0.50	mg/kg	SW846 6020
Cobalt	5.7	0.10	mg/kg	SW846 6020
Chromium	21.4	0.10	mg/kg	SW846 6020
Manganese	364	0.10	mg/kg	SW846 6020
Nickel	11.7	0.10	mg/kg	SW846 6020
Selenium	1.4	0.50	mg/kg	SW846 6020
Thallium	0.48	0.10	mg/kg	SW846 6020
Vanadium	18.8	0.50	mg/kg	SW846 6020
Mercury	1.1	0.16	mg/kg	SW846 7471A
Aluminum	11200	5.0	mg/kg	SW846 6010B
Arsenic	1040	10.0	mg/kg	SW846 6010B
Beryllium	1.1	0.20	mg/kg	SW846 6010B
Calcium	8110	10.0	mg/kg	SW846 6010B
Cadmium	14.2	0.50	mg/kg	SW846 6010B
Copper	52.7	2.0	mg/kg	SW846 6010B
Iron	14600	10.0	mg/kg	SW846 6010B
Potassium	1650	500	mg/kg	SW846 6010B
Magnesium	3100	5.0	mg/kg	SW846 6010B
Lead	1750	5.0	mg/kg	SW846 6010B
Antimony	4.7 B	6.0	mg/kg	SW846 6010B
Zinc	433	2.0	mg/kg	SW846 6010B
ND-98-336 04/01/99 08:26 009				
Silver	0.82	0.010	mg/kg	SW846 6020
Barium	121	0.10	mg/kg	SW846 6020
Cobalt	4.3	0.10	mg/kg	SW846 6020
Chromium	47.8	0.10	mg/kg	SW846 6020
Manganese	338	0.10	mg/kg	SW846 6020
Nickel	10.4	0.10	mg/kg	SW846 6020
Selenium	1.7	0.50	mg/kg	SW846 6020
Thallium	0.63	0.10	mg/kg	SW846 6020
Vanadium	15.2	0.50	mg/kg	SW846 6020
Mercury	1.8	0.16	mg/kg	SW846 7471A
Aluminum	8370	5.0	mg/kg	SW846 6010B
Arsenic	1590	10.0	mg/kg	SW846 6010B
Beryllium	0.69	0.20	mg/kg	SW846 6010B
Calcium	4000	10.0	mg/kg	SW846 6010B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

D9D100118

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
ND-98-336 04/01/99 08:26 009				
Cadmium	13.7	0.50	mg/kg	SW846 6010B
Copper	43.6	2.0	mg/kg	SW846 6010B
Iron	14600	10.0	mg/kg	SW846 6010B
Potassium	1650	500	mg/kg	SW846 6010B
Magnesium	2510	5.0	mg/kg	SW846 6010B
Lead	1040	5.0	mg/kg	SW846 6010B
Antimony	14.2	6.0	mg/kg	SW846 6010B
Zinc	279	2.0	mg/kg	SW846 6010B
ND-98-245 04/01/99 08:26 010				
Silver	0.80	0.010	mg/kg	SW846 6020
Barium	252	0.50	mg/kg	SW846 6020
Cobalt	6.8	0.10	mg/kg	SW846 6020
Chromium	13.8	0.10	mg/kg	SW846 6020
Manganese	396	0.10	mg/kg	SW846 6020
Nickel	11.2	0.10	mg/kg	SW846 6020
Selenium	0.36 B	0.50	mg/kg	SW846 6020
Thallium	0.33	0.10	mg/kg	SW846 6020
Vanadium	18.6	0.50	mg/kg	SW846 6020
Mercury	1.0	0.20	mg/kg	SW846 7471A
Aluminum	12100	5.0	mg/kg	SW846 6010B
Arsenic	178	10.0	mg/kg	SW846 6010B
Beryllium	1.0	0.20	mg/kg	SW846 6010B
Calcium	4290	10.0	mg/kg	SW846 6010B
Cadmium	4.0	0.50	mg/kg	SW846 6010B
Copper	36.3	2.0	mg/kg	SW846 6010B
Iron	19400	10.0	mg/kg	SW846 6010B
Potassium	4320	500	mg/kg	SW846 6010B
Magnesium	3320	5.0	mg/kg	SW846 6010B
Sodium	99.5 B	500	mg/kg	SW846 6010B
Lead	367	5.0	mg/kg	SW846 6010B
Antimony	2.2 B	6.0	mg/kg	SW846 6010B
Zinc	204	2.0	mg/kg	SW846 6010B

METHODS SUMMARY

D9D100118

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B
ICP-MS (6020)	SW846 6020	SW846 3050B
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

D9D100118

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
CTGKV	001	ND-98-253	04/01/99	08:26
CTGKX	002	ND-98-782	04/01/99	08:26
CTGL0	003	ND-98-292	04/01/99	08:26
CTGL1	004	ND-98-640	04/01/99	08:26
CTGL2	005	ND-98-627	04/01/99	08:26
CTGL3	006	ND-98-549	04/01/99	08:26
CTGL4	007	ND-98-1302	04/01/99	08:26
CTGL5	008	ND-98-1273	04/01/99	08:26
CTGL6	009	ND-98-336	04/01/99	08:26
CTGL7	010	ND-98-245	04/01/99	08:26

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

QC DATA ASSOCIATION SUMMARY

D9D100118

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9102157	9102044
	SOLID	SW846 6010B		9103164	9103071
002	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9105203	9105099
	SOLID	SW846 6010B		9103164	9103071
003	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9102157	9102044
	SOLID	SW846 6010B		9103164	9103071
004	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9102157	9102044
	SOLID	SW846 6010B		9103164	9103071
005	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9102157	9102044
	SOLID	SW846 6010B		9103164	9103071
006	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9105203	9105099
	SOLID	SW846 6010B		9103164	9103071
007	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9116195	9116059
	SOLID	SW846 6010B		9103164	9103071
008	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9102157	9102044
	SOLID	SW846 6010B		9103164	9103071
009	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9102157	9102044
	SOLID	SW846 6010B		9103164	9103071
010	SOLID	SW846 6020		9103166	9103072
	SOLID	SW846 7471A		9105203	9105099
	SOLID	SW846 6010B		9103164	9103071

Quanterra, Inc.

Cover Page - Inorganic Analysis Data Package

Client ID	Lab Sample ID:
ND-98-1273	CTGL5
ND-98-1302	CTGL4
ND-98-245	CTGL7
ND-98-253	CTGKV
ND-98-292	CTGL0
ND-98-336	CTGL6
ND-98-549	CTGL3
ND-98-627	CTGL2
ND-98-640	CTGL1
ND-98-782	CTGKX

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than conditions detailed above. Release of the data combined in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Richard Clinkscales Name: Richard Clinkscales

Date: 4/30/99 Title: Metbrgldr

WESTON, ROY F.

Client Sample ID: ND-98-253

TOTAL Metals

Lot-Sample #...: D9D100118-001 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9102157						
Mercury	2.9	0.16	mg/kg	SW846 7471A	04/13-04/14/99	CTGKV10Q
Prep Batch #...: 9103164						
Aluminum	9770	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV101
Arsenic	1360	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV102
Beryllium	0.83	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV103
Calcium	8830	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV104
Cadmium	11.1	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV105
Copper	71.4	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV106
Iron	17300	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGKV107
Potassium	3080	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGKV108
Magnesium	2930	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV109
Sodium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGKV10A
Lead	1520	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV10C
Antimony	8.1	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV10D
Zinc	410	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGKV10E
Prep Batch #...: 9103166						
Silver	0.58	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10F
Barium	339	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10G
Cobalt	5.6	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10H
Chromium	16.7	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10J
Manganese	325	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10K
Nickel	10.4	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10L
Selenium	1.5	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10M
Thallium	0.49	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10N
Vanadium	16.5	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGKV10P

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-782

TOTAL Metals

Lot-Sample #...: D9D100118-002 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9103164						
Aluminum	7870	25.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX101
Arsenic	8890	50.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX102
Beryllium	0.85 B	1.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX103
Calcium	6540	50.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX104
Cadmium	12.5	2.5	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX105
Copper	42.5	10.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX106
Iron	14500	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGKX107
Potassium	2440	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGKX108
Magnesium	2670	25.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX109
Sodium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGKX10A
Lead	1870	25.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX10C
Antimony	42.2	30.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX10D
Zinc	278	10.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGKX10E
Prep Batch #...: 9103166						
Silver	0.44	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10F
Barium	155	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10G
Cobalt	3.8	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10H
Chromium	21.0	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10J
Manganese	186	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10K
Nickel	9.7	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10L
Selenium	4.5	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10M
Thallium	0.63	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10N
Vanadium	20.9	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGKX10P
Prep Batch #...: 9105203						
Mercury	11.4	0.99	mg/kg	SW846 7471A	04/15-04/16/99	CTGKX10Q

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-292

TOTAL Metals

Lot-Sample #...: D9D100118-003 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9102157						
Mercury	0.23	0.033	mg/kg	SW846 7471A	04/13-04/14/99	CTGL010Q
Prep Batch #...: 9103164						
Aluminum	6650	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL0101
Arsenic	151	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL0102
Beryllium	0.56	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTGL0103
Calcium	2690	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL0104
Cadmium	4.4	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTGL0105
Copper	19.7	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL0106
Iron	12400	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGL0107
Potassium	1960	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL0108
Magnesium	2020	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL0109
Sodium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL010A
Lead	219	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL010C
Antimony	2.3 B	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL010D
Zinc	151	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL010E
Prep Batch #...: 9103166						
Silver	0.30	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGL010F
Barium	124	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL010G
Cobalt	3.5	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL010H
Chromium	22.8	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL010J
Manganese	170	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL010K
Nickel	7.1	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL010L
Selenium	0.65	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL010M
Thallium	0.31	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL010N
Vanadium	13.4	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL010P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-640

TOTAL Metals

Lot-Sample #...: D9D100118-004 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9102157						
Mercury	0.15	0.033	mg/kg	SW846 7471A	04/13-04/14/99	CTGL110Q
Prep Batch #...: 9103164						
Aluminum	7610	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL1101
Arsenic	127	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL1102
Beryllium	0.68	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTGL1103
Calcium	2150	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL1104
Cadmium	1.6	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTGL1105
Copper	28.5	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL1106
Iron	15900	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGL1107
Potassium	2410	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL1108
Magnesium	2100	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL1109
Sodium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL110A
Lead	171	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL110C
Antimony	ND	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL110D
Zinc	86.1	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL110E
Prep Batch #...: 9103166						
Silver	0.79	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGL110F
Barium	125	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL110G
Cobalt	3.8	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL110H
Chromium	8.6	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL110J
Manganese	188	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL110K
Nickel	6.7	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL110L
Selenium	0.31 B	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL110M
Thallium	0.20	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL110N
Vanadium	13.5	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL110P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-627

TOTAL Metals

Lot-Sample #...: D9D100118-005 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9102157						
Mercury	0.93	0.16	mg/kg	SW846 7471A	04/13-04/14/99	CTGL210Q
Prep Batch #...: 9103164						
Aluminum	8730	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL2101
Arsenic	584	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL2102
Beryllium	0.73	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTGL2103
Calcium	5720	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL2104
Cadmium	7.6	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTGL2105
Copper	40.3	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL2106
Iron	16600	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGL2107
Potassium	1980	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL2108
Magnesium	3150	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL2109
Sodium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL210A
Lead	1230	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL210C
Antimony	2.4 B	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL210D
Zinc	261	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL210E
Prep Batch #...: 9103166						
Silver	1.1	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGL210F
Barium	157	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL210G
Cobalt	4.7	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL210H
Chromium	55.5	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL210J
Manganese	302	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL210K
Nickel	9.8	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL210L
Selenium	0.92	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL210M
Thallium	0.43	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL210N
Vanadium	15.3	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL210P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-549

TOTAL Metals

Lot-Sample #...: D9D100118-006 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9103164						
Aluminum	9520	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL3101
Arsenic	1990	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL3102
Beryllium	0.74	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTGL3103
Calcium	7540	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL3104
Cadmium	7.1	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTGL3105
Copper	30.7	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL3106
Iron	16200	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGL3107
Potassium	2640	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL3108
Magnesium	2910	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL3109
Sodium	648	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL310A
Lead	743	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL310C
Antimony	10.7	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL310D
Zinc	3680	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL310E
Prep Batch #...: 9103166						
Silver	0.80	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGL310F
Barium	189	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL310G
Cobalt	5.4	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL310H
Chromium	21.0	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL310J
Manganese	346	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL310K
Nickel	9.0	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL310L
Selenium	2.6	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL310M
Thallium	0.33	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL310N
Vanadium	15.7	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL310P
Prep Batch #...: 9105203						
Mercury	6.6	0.99	mg/kg	SW846 7471A	04/15-04/16/99	CTGL310Q

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1302

TOTAL Metals

Lot-Sample #...: D9D100118-007 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9103164						
Aluminum	9950	25.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGL4101
Arsenic	9940	100	mg/kg	SW846 6010B	04/13-04/22/99	CTGL4102
Beryllium	0.92 B	1.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGL4103
Calcium	9960	50.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGL4104
Cadmium	19.0	2.5	mg/kg	SW846 6010B	04/13-04/20/99	CTGL4105
Copper	47.4	10.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGL4106
Iron	16400	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGL4107
Potassium	1800	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL4108
Magnesium	3390	25.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGL4109
Sodium	264 B	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL410A
Lead	3550	25.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGL410C
Antimony	54.4	30.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGL410D
Zinc	1060	10.0	mg/kg	SW846 6010B	04/13-04/20/99	CTGL410E
Prep Batch #...: 9103166						
Silver	0.63	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGL410F
Barium	278	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL410G
Cobalt	4.9	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL410H
Chromium	36.4	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL410J
Manganese	320	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL410K
Nickel	12.1	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL410L
Selenium	5.2	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL410M
Thallium	0.68	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL410N
Vanadium	15.3	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL410P
Prep Batch #...: 9116195						
Mercury	8.7	0.38	mg/kg	SW846 7471A	04/27-04/28/99	CTGL420Q

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-1273

TOTAL Metals

Lot-Sample #...: D9D100118-008 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9102157						
Mercury	1.1	0.16	mg/kg	SW846 7471A	04/13-04/14/99	CTGL510Q
Prep Batch #...: 9103164						
Aluminum	11200	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL5101
Arsenic	1040	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL5102
Beryllium	1.1	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTGL5103
Calcium	8110	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL5104
Cadmium	14.2	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTGL5105
Copper	52.7	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL5106
Iron	14600	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGL5107
Potassium	1650	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL5108
Magnesium	3100	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL5109
Sodium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL510A
Lead	1750	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL510C
Antimony	4.7 B	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL510D
Zinc	433	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL510E
Prep Batch #...: 9103166						
Silver	0.85	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGL510F
Barium	330	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL510G
Cobalt	5.7	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL510H
Chromium	21.4	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL510J
Manganese	364	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL510K
Nickel	11.7	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL510L
Selenium	1.4	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL510M
Thallium	0.48	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL510N
Vanadium	18.8	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL510P

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-336

TOTAL Metals

Lot-Sample #...: D9D100118-009 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9102157						
Mercury	1.8	0.16	mg/kg	SW846 7471A	04/13-04/14/99	CTGL610Q
Prep Batch #...: 9103164						
Aluminum	8370	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL6101
Arsenic	1590	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL6102
Beryllium	0.69	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTGL6103
Calcium	4000	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL6104
Cadmium	13.7	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTGL6105
Copper	43.6	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL6106
Iron	14600	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGL6107
Potassium	1650	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL6108
Magnesium	2510	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL6109
Sodium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL610A
Lead	1040	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL610C
Antimony	14.2	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL610D
Zinc	279	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL610E
Prep Batch #...: 9103166						
Silver	0.82	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGL610F
Cobalt	4.3	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL610H
Barium	121	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL610G
Chromium	47.8	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL610J
Manganese	338	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL610K
Nickel	10.4	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL610L
Thallium	0.63	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL610N
Vanadium	15.2	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL610P
Selenium	1.7	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL610M

FORM 1
Equivalent

WESTON, ROY F.

Client Sample ID: ND-98-245

TOTAL Metals

Lot-Sample #...: D9D100118-010 Matrix.....: SOLID
Date Sampled...: 04/01/99 Date Received..: 04/09/99

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 9103164						
Aluminum	12100	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL7101
Arsenic	178	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL7102
Beryllium	1.0	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTGL7103
Calcium	4290	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL7104
Cadmium	4.0	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTGL7105
Copper	36.3	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL7106
Iron	19400	10.0	mg/kg	SW846 6010B	04/13-04/19/99	CTGL7107
Potassium	4320	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL7108
Magnesium	3320	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL7109
Sodium	99.5 B	500	mg/kg	SW846 6010B	04/13-04/19/99	CTGL710A
Lead	367	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL710C
Antimony	2.2 B	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL710D
Zinc	204	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTGL710E
Prep Batch #...: 9103166						
Silver	0.80	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTGL710F
Barium	252	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL710G
Cobalt	6.8	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL710H
Chromium	13.8	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL710J
Manganese	396	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL710K
Nickel	11.2	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL710L
Selenium	0.36 B	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL710M
Thallium	0.33	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTGL710N
Vanadium	18.6	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTGL710P
Prep Batch #...: 9105203						
Mercury	1.0	0.20	mg/kg	SW846 7471A	04/15-04/16/99	CTGL710Q

NOTE(S):

B Estimated result. Result is less than RL.

FORM 1
Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: CVAA **Units:** ug/L

Chart Number: 0414s1.prn **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	Ck2 4/14/99 8:45 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	2	1.912	95.6								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: CVAA **Units:** ug/L

Chart Number: 0416sd.prn **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	Ck2 4/16/99 8:56 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	2	2.098	104.9								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: CVAA **Units:** ug/L

Chart Number: 0428s.prn **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	Ck2 4/28/99 7:44 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	2	1.958	97.9								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICP **Units:** ug/L

Chart Number: 990419d.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	ICV 4/19/99 8:56 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Iron	259.94	5000	4982	99.6								
Potassium	766.491	50000	47864	95.7								
Sodium	330.223	200000	194680	97.3								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPMS **Units:** ug/L

Chart Number: 041599.rep **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	QC Std 1 4/15/99 9:00 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Barium	135	200	204.54	**102.3**								
Chromium	52	200	205.83	**102.9**								
Cobalt	59	200	203.53	**101.8**								
Manganese	55	200	203.45	**101.7**								
Nickel	60	200	208.71	**104.4**								
Selenium	82	200	208.05	**104.0**								
Silver	107	200	201.15	**100.6**								
Thallium	205	200	207.32	**103.7**								
Vanadium	51	200	205.75	**102.9**								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPST **Units:** ug/L

Chart Number: 0416w.arc **Acceptable Range:** 0% - 0%

Element	WL/ Mass	True Conc	ICV 4/16/99 11:03 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4905.3	**98.1**								
Antimony	206.838	500	488.01	**97.6**								
Arsenic	189.042	500	494.11	**98.8**								
Beryllium	313.042	500	508.88	**101.8**								
Cadmium	226.502	500	510.28	**102.1**								
Calcium	317.933	20000	19620	**98.1**								
Cobalt	228.616	500	502.03	**100.4**								
Lead	220.353	500	504.45	**100.9**								
Magnesium	279.078	20000	20134	**100.7**								
Zinc	206.2	500	501.98	**100.4**								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPST **Units:** ug/L

Chart Number: 0420w.arc **Acceptable Range:** 0% - 0%

Element	WL/ Mass	True Conc	ICV 4/20/99 9:10 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4944.6	**98.9**								
Antimony	206.838	500	483.27	**96.7**								
Arsenic	189.042	500	502.46	**100.5**								
Beryllium	313.042	500	518.39	**103.7**								
Cadmium	226.502	500	524.93	**105.0**								
Calcium	317.933	20000	19823	**99.1**								
Cobalt	228.616	500	514.33	**102.9**								
Lead	220.353	500	520.16	**104.0**								
Magnesium	279.078	20000	20334	**101.7**								
Zinc	206.2	500	521.76	**104.4**								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Verification Standard

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	ICV 4/22/99 9:09 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4825.9	96.5								
Antimony	206.838	500	491.06	98.2								
Arsenic	189.042	500	481.65	96.3								
Beryllium	313.042	500	498.01	99.6								
Cadmium	226.502	500	500.58	100.1								
Calcium	317.933	20000	19391	97.0								
Cobalt	228.616	500	495.26	99.1								
Lead	220.353	500	496.16	99.2								
Magnesium	279.078	20000	19836	99.2								
Zinc	206.2	500	493.61	98.7								

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAA **Units:** ug/L

Chart Number: 0414s1.prn **Acceptable Range:** 80% - 120%

Element	WL/ Mass	True Conc	Ck4 4/14/99 9:15 AM		Ck4 4/14/99 9:44 AM		Ck4 4/14/99 10:21 AM		Ck4 4/14/99 10:56 AM		Ck4 4/14/99 11:20 AM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5	5.369	**107.4**	5.427	**108.5**	5.597	**111.9**	5.536	**110.7**	5.441	**108.8**

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAA **Units:** ug/L

Chart Number: 0414s1.prn **Acceptable Range:** 80% - 120%

Element	WL/ Mass	True Conc	Ck4 4/14/99 11:43 AM		Ck4 4/14/99 11:59 AM		Ck4 4/14/99 12:20 PM					
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5	5.191	**103.8**	5.442	**108.8**	5.231	**104.6**				

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAA **Units:** ug/L

Chart Number: 0416sd.prn **Acceptable Range:** 80% - 120%

Element	WL/ Mass	True Conc	Ck4 4/16/99 9:40 AM		Ck4 4/16/99 10:11 AM		Ck4 4/16/99 10:44 AM		Ck4 4/16/99 10:53 AM			
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5	5.625	**112.5**	5.746	**114.9**	5.208	**104.2**	5.173	**103.5**		

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAA **Units:** ug/L

Chart Number: 0428s.prn **Acceptable Range:** 80% - 120%

Element	WL/ Mass	True Conc	Ck4 4/28/99 8:05 AM		Ck4 4/28/99 8:42 AM		Ck4 4/28/99 9:01 AM		Ck4 4/28/99 9:34 AM		Ck4 4/28/99 9:56 AM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5	5.041	**100.8**	5.707	**114.1**	5.643	**112.9**	5.719	**114.4**	5.749	**115.0**

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: CVAA **Units:** ug/L

Chart Number: 0428s.prn **Acceptable Range:** 80% - 120%

Element	WL/ Mass	True Conc	Ck4 4/28/99 10:28 AM Found	% Rec	Ck4 4/28/99 10:47 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Mercury	253.7	5	5.719	**114.4**	5.637	**112.7**						

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICP **Units:** ug/L

Chart Number: 990419d.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV1 4/19/99 9:15 AM		CCV2 4/19/99 9:48 AM		CCV3 4/19/99 10:31 AM		CCV4 4/19/99 11:15 AM		CCV5 4/19/99 11:45 AM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Iron	259.94	5000	5094.1	**101.9**	5089.8	**101.8**	5106.5	**102.1**	5111.2	**102.2**	5194.7	**103.9**
Potassium	766.491	50000	49408	**98.8**	49340	**98.7**	49592	**99.2**	49127	**98.3**	49576	**99.2**
Sodium	330.223	200000	201090	**100.5**	200570	**100.3**	202250	**101.1**	201580	**100.8**	202570	**101.3**

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICP **Units:** ug/L

Chart Number: 990419d.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV6 4/19/99 12:31 PM		CCV7 4/19/99 1:14 PM		CCV8 4/19/99 1:53 PM		CCV9 4/19/99 2:41 PM		CCV10 4/19/99 3:10 PM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Iron	259.94	5000	5199.8	**104.0**	5187.9	**103.8**	5139.3	**102.8**	5275.2	**105.5**	5171.7	**103.4**
Potassium	766.491	50000	48997	**98.0**	48451	**96.9**	48008	**96.0**	48387	**96.8**	48661	**97.3**
Sodium	330.223	200000	202700	**101.3**	200760	**100.4**	200210	**100.1**	201040	**100.5**	202460	**101.2**

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPMS **Units:** ug/L

Chart Number: 041599.rep **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	QC Std 3 4/15/99 9:26 AM		QC Std 3 4/15/99 10:15 AM		QC Std 3 4/15/99 11:04 AM		QC Std 3 4/15/99 11:31 AM			
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Barium	135	100	99.882	**99.9**	103.14	**103.1**	104.54	**104.5**	102.16	**102.2**		
Chromium	52	100	99.845	**99.8**	98.759	**98.8**	94.253	**94.3**	94.85	**94.9**		
Cobalt	59	100	98.368	**98.4**	97.887	**97.9**	95.092	**95.1**	93	**93.0**		
Manganese	55	100	99.166	**99.2**	96.699	**96.7**	93.466	**93.5**	92.884	**92.9**		
Nickel	60	100	97.315	**97.3**	97.571	**97.6**	95.49	**95.5**	92.862	**92.9**		
Selenium	82	100	99.767	**99.8**	99.216	**99.2**	98.837	**98.8**	98.803	**98.8**		
Silver	107	100	99.573	**99.6**	99.763	**99.8**	99.487	**99.5**	97.102	**97.1**		
Thallium	205	100	102.11	**102.1**	97.858	**97.9**	95.922	**95.9**	94.834	**94.8**		
Vanadium	51	100	99.764	**99.8**	98.382	**98.4**	92.843	**92.8**	93.49	**93.5**		

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPST **Units:** ug/L

Chart Number: 0416w.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV1 4/16/99 11:28 AM		CCV2 4/16/99 1:03 PM		CCV3 4/16/99 1:25 PM		CCV4 4/16/99 3:06 PM		CCV5 4/16/99 3:55 PM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4937.4	98.7	4947.6	99.0	4876.1	97.5	4987.6	99.8	4952.2	99.0
Arsenic	189.042	1000	972.95	97.3	982	98.2	969.29	96.9	986.23	98.6	978.11	97.8
Beryllium	313.042	500	497.83	99.6	503.04	100.6	494.74	98.9	500.6	100.1	496.93	99.4
Cadmium	226.502	500	496.79	99.4	495.96	99.2	489.24	97.8	497.37	99.5	493.85	98.8
Calcium	317.933	20000	19879	99.4	20063	100.3	19674	98.4	19944	99.7	19803	99.0
Cobalt	228.616	500	494.43	98.9	499.57	99.9	489.1	97.8	490.37	98.1	486.19	97.2
Lead	220.353	500	493.05	98.6	492.29	98.5	487.27	97.5	495.07	99.0	485.62	97.1
Magnesium	279.078	20000	19825	99.1	19943	99.7	19570	97.9	19777	98.9	19624	98.1
Zinc	206.2	500	491.77	98.4	492.88	98.6	481.22	96.2	484.17	96.8	479.09	95.8

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPST **Units:** ug/L

Chart Number: 0416w.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV6 4/16/99 5:06 PM		CCV7 4/16/99 5:48 PM		CCV8 4/16/99 6:12 PM					
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	5052.8	101.1	4938.6	98.8	5340.7	106.8				
Antimony	206.838	500	490.18	98.0	488.48	97.7	488.71	97.7				
Arsenic	189.042	1000	973.67	97.4	964.88	96.5	969.12	96.9				
Beryllium	313.042	500	499.15	99.8	494.29	98.9	496.91	99.4				
Cadmium	226.502	500	496.33	99.3	492.44	98.5	496.2	99.2				
Calcium	317.933	20000	19959	99.8	20793	104.0	20211	101.1				
Cobalt	228.616	500	487.04	97.4	482.88	96.6	484.27	96.9				
Lead	220.353	500	484.76	97.0	479.2	95.8	480.74	96.1				
Magnesium	279.078	20000	19717	98.6	20023	100.1	19975	99.9				
Zinc	206.2	500	477.54	95.5	472.96	94.6	475.41	95.1				

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPST **Units:** ug/L

Chart Number: 0420w.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV1 4/20/99 9:43 AM		CCV2 4/20/99 10:36 AM		CCV3 4/20/99 11:47 AM		CCV4 4/20/99 12:14 PM		CCV5 4/20/99 1:19 PM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	5328.7	**106.6**	4950.4	**99.0**	4962.9	**99.3**	5006.7	**100.1**	4958.3	**99.2**
Antimony	206.838	500	492.71	**98.5**	495.62	**99.1**	496.65	**99.3**	500.73	**100.1**	494.32	**98.9**
Arsenic	189.042	1000	983.68	**98.4**	1000.8	**100.1**	982.64	**98.3**	990.49	**99.0**	975.24	**97.5**
Beryllium	313.042	500	503.87	**100.8**	505.92	**101.2**	505.47	**101.1**	509.09	**101.8**	505.75	**101.2**
Cadmium	226.502	500	503.31	**100.7**	502.48	**100.5**	499.42	**99.9**	502.68	**100.5**	501.27	**100.3**
Calcium	317.933	20000	20517	**102.6**	20117	**100.6**	20186	**100.9**	20225	**101.1**	20219	**101.1**
Cobalt	228.616	500	499.17	**99.8**	497.44	**99.5**	495.11	**99.0**	498.83	**99.8**	492.32	**98.5**
Lead	220.353	500	498.87	**99.8**	499.7	**99.9**	493.29	**98.7**	493.84	**98.8**	490.07	**98.0**
Magnesium	279.078	20000	20421	**102.1**	19964	**99.8**	19899	**99.5**	20001	**100.0**	19853	**99.3**
Zinc	206.2	500	499.97	**100.0**	494.89	**99.0**	487.14	**97.4**	489.78	**98.0**	492.53	**98.5**

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPST **Units:** ug/L

Chart Number: 0420w.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV6 4/20/99 2:15 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4836.1	**96.7**								
Antimony	206.838	500	493.15	**98.6**								
Arsenic	189.042	1000	1034.7	**103.5**								
Beryllium	313.042	500	549.17	**109.8**								
Cadmium	226.502	500	566.74	**113.3**								
Calcium	317.933	20000	22980	**114.9**								
Cobalt	228.616	500	533.06	**106.6**								
Lead	220.353	500	543.9	**108.8**								
Magnesium	279.078	20000	22441	**112.2**								
Zinc	206.2	500	581.61	**116.3**								

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV1 4/22/99 9:31 AM		CCV2 4/22/99 10:23 AM		CCV3 4/22/99 10:43 AM		CCV4 4/22/99 12:13 PM		CCV5 4/22/99 1:09 PM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	5486	109.7	4940.6	98.8	4939.2	98.8	4974.2	99.5	5009.3	100.2
Arsenic	189.042	1000	991.76	99.2	997.8	99.8	993.99	99.4	989.51	99.0	997.72	99.8
Beryllium	313.042	500	509.53	101.9	514.59	102.9	509.22	101.8	509.65	101.9	513.83	102.8
Cadmium	226.502	500	506.4	101.3	508.71	101.7	503.21	100.6	498.6	99.7	506.2	101.2
Calcium	317.933	20000	20732	103.7	20796	104.0	20718	103.6	20305	101.5	20426	102.1
Cobalt	228.616	500	503.34	100.7	505.98	101.2	501.17	100.2	501.71	100.3	501.22	100.2
Lead	220.353	500	501.22	100.2	504.01	100.8	500.95	100.2	503.43	100.7	499.78	100.0
Magnesium	279.078	20000	20684	103.4	20367	101.8	20198	101.0	20123	100.6	20216	101.1
Zinc	206.2	500	504.47	100.9	507.48	101.5	497.81	99.6	502.62	100.5	513.22	102.6

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV6 4/22/99 2:09 PM		CCV7 4/22/99 2:58 PM		CCV8 4/22/99 4:08 PM		CCV9 4/22/99 5:21 PM		CCV8 4/22/99 6:35 PM	
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	5063.8	**101.3**	5183.1	**103.7**	4890.5	**97.8**	4821.5	**96.4**	4975.4	**99.5**
Antimony	206.838	500	491.51	**98.3**	491.68	**98.3**	491.66	**98.3**	492.28	**98.5**	505.98	**101.2**
Arsenic	189.042	1000	983.16	**98.3**	988.56	**98.9**	1000.7	**100.1**	1118.1	**111.8**	1128.9	**112.9**
Beryllium	313.042	500	507.58	**101.5**	508.76	**101.8**	522.33	**104.5**	601.52	**120.3**	605.95	**121.2**
Cadmium	226.502	500	500.57	**100.1**	497.58	**99.5**	517.23	**103.4**	652.01	**130.4**	648.1	**129.6**
Calcium	317.933	20000	20082	**100.4**	20297	**101.5**	21265	**106.3**	26084	**130.4**	26291	**131.5**
Cobalt	228.616	500	495.27	**99.1**	499.25	**99.9**	511.32	**102.3**	592.62	**118.5**	597.73	**119.5**
Lead	220.353	500	493.45	**98.7**	495.47	**99.1**	509.18	**101.8**	625.69	**125.1**	620.5	**124.1**
Magnesium	279.078	20000	19969	**99.8**	20206	**101.0**	20712	**103.6**	26310	**131.6**	26156	**130.8**
Zinc	206.2	500	493.27	**98.7**	495.68	**99.1**	527.04	**105.4**	738.33	**147.7**	729.42	**145.9**

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Verification

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc **Acceptable Range:** 90% - 110%

Element	WL/ Mass	True Conc	CCV9 4/22/99 7:18 PM Found	% Rec	CCV10 4/22/99 7:43 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	5000	4839.2	**96.8**	5257.2	**105.1**						
Antimony	206.838	500	498.23	**99.6**	496.16	**99.2**						
Arsenic	189.042	1000	1106.8	**110.7**	1110	**111.0**						
Beryllium	313.042	500	594.58	**118.9**	596.54	**119.3**						
Cadmium	226.502	500	636.61	**127.3**	640.6	**128.1**						
Calcium	317.933	20000	26505	**132.5**	29716	**148.6**						
Cobalt	228.616	500	586.56	**117.3**	589.55	**117.9**						
Lead	220.353	500	609.11	**121.8**	614.92	**123.0**						
Magnesium	279.078	20000	25934	**129.7**	27321	**136.6**						
Zinc	206.2	500	711.58	**142.3**	723.32	**144.7**						

Quanterra, Inc.

Metals Data Reporting Form

Contract Required Detection Limit Standard

Instrument: ICPST **Units:** ug/L

Chart Number: 0416w.arc **Acceptable Range:** 50% - 150%

Element	WL/ Mass	True Conc	CRI 4/16/99 11:13 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	0	-0.55	**0.0**								
Antimony	206.838	120	118.76	**99.0**								
Arsenic	189.042	20	18.25	**91.3**								
Beryllium	313.042	10	10.36	**103.6**								
Cadmium	226.502	10	10.71	**107.1**								
Calcium	317.933	0	-1.01	**0.0**								
Cobalt	228.616	100	100.18	**100.2**								
Lead	220.353	6	5.22	**87.0**								
Magnesium	279.078	0	-5.11	**0.0**								
Zinc	206.2	40	40.12	**100.3**								

Quanterra, Inc.

Metals Data Reporting Form

Contract Required Detection Limit Standard

Instrument: ICPST **Units:** ug/L

Chart Number: 0420w.arc **Acceptable Range:** 50% - 150%

Element	WL/ Mass	True Conc	CRI 4/20/99 9:28 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	0	2.09	**0.0**								
Antimony	206.838	120	114.55	**95.5**								
Arsenic	189.042	20	17.19	**86.0**								
Beryllium	313.042	10	10.3	**103.0**								
Cadmium	226.502	10	10.29	**102.9**								
Calcium	317.933	0	-19.68	**0.0**								
Cobalt	228.616	100	98.78	**98.8**								
Lead	220.353	6	6.37	**106.2**								
Magnesium	279.078	0	-1.66	**0.0**								
Zinc	206.2	40	37.3	**93.2**								

Quanterra, Inc.

Metals Data Reporting Form

Contract Required Detection Limit Standard

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc **Acceptable Range:** 50% - 150%

Element	WL/ Mass	True Conc	CRI 4/22/99 9:17 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	0	-91.67	**0.0**								
Antimony	206.838	120	119.29	**99.4**								
Arsenic	189.042	20	18.84	**94.2**								
Beryllium	313.042	10	9.7	**97.0**								
Cadmium	226.502	10	9.63	**96.3**								
Calcium	317.933	0	-125.7	**0.0**								
Cobalt	228.616	100	97.67	**97.7**								
Lead	220.353	6	6.13	**102.2**								
Magnesium	279.078	0	-122.96	**0.0**								
Zinc	206.2	40	37.85	**94.6**								

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: 0414s1.prn

Element	WL/ Mass	Report Limit	Ck1 4/14/99 8:47 AM									
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.2	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: 0416sd.prn

Element	WL/ Mass	Report Limit	Ck1 4/16/99 8:59 AM									
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.2	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: 0428s.prn

Element	WL/ Mass	Report Limit	Ck1 4/28/99 7:47 AM									
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.2	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICP **Units:** ug/L

Chart Number: 990419d.arc

Element	WL/ Mass	Report Limit	ICB 4/19/99 8:59 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Iron	259.94	100	100	U								
Potassium	766.491	5000	5000	U								
Sodium	330.223	5000	5000	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPMS **Units:** ug/L

Chart Number: 041599.rep

Element	WL/ Mass	Report Limit	QC Std 2 4/15/99 9:04 AM									
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Barium	135	1	1	U								
Chromium	52	1	1	U								
Cobalt	59	1	1	U								
Manganese	55	1	1	U								
Nickel	60	1	1	U								
Selenium	82	5	5	U								
Silver	107	1	1	U								
Thallium	205	1	1	U								
Vanadium	51	5	5	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0416w.arc

Element	WL/ Mass	Report Limit	ICB 4/16/99 11:08 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Antimony	206.838	10	10	U								
Arsenic	189.042	10	10	U								
Beryllium	313.042	2	2	U								
Cadmium	226.502	5	5	U								
Calcium	317.933	200	200	U								
Cobalt	228.616	10	10	U								
Lead	220.353	3	3	U								
Magnesium	279.078	200	200	U								
Zinc	206.2	20	20	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0420w.arc

Element	WL/ Mass	Report Limit	ICB 4/20/99 9:23 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U								
Antimony	206.838	10	10	U								
Arsenic	189.042	10	10	U								
Beryllium	313.042	2	2	U								
Cadmium	226.502	5	5	U								
Calcium	317.933	200	200	U								
Cobalt	228.616	10	10	U								
Lead	220.353	3	3	U								
Magnesium	279.078	200	200	U								
Zinc	206.2	20	20	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Initial Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc

Element	WL/ Mass	Report Limit	ICB 4/22/99 9:13 AM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Antimony	206.838	10	10	U								
Arsenic	189.042	10	10	U								
Beryllium	313.042	2	2	U								
Cadmium	226.502	5	5	U								
Calcium	317.933	200	200	U								
Cobalt	228.616	10	10	U								
Lead	220.353	3	3	U								
Magnesium	279.078	200	200	U								
Zinc	206.2	20	20	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: 0414s1.prn

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	Ck1 4/14/99 9:18 AM		Ck1 4/14/99 9:47 AM		Ck1 4/14/99 10:24 AM		Ck1 4/14/99 10:59 AM		Ck1 4/14/99 11:23 AM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: 0414s1.prn

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	Ck1 4/14/99 11:46 AM		Ck1 4/14/99 12:02 PM		Ck1 4/14/99 12:23 PM					
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.2	U	0.2	U	0.2	U				

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: 0416sd.prn

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	Ck1 4/16/99 9:43 AM		Ck1 4/16/99 10:14 AM		Ck1 4/16/99 10:47 AM		Ck1 4/16/99 10:56 AM			
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.2	U	0.2	U	0.2	U	0.2	U		

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: 0428s.prn

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	Ckl 4/28/99 8:08 AM		Ckl 4/28/99 8:45 AM		Ckl 4/28/99 9:04 AM		Ckl 4/28/99 9:37 AM		Ckl 4/28/99 10:00 AM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: CVAA **Units:** ug/L

Chart Number: 0428s.prn

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	Ck1 4/28/99 10:31 AM		Ck1 4/28/99 10:50 AM							
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Mercury	253.7	0.2	0.2	U	0.2	U						

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICP **Units:** ug/L

Chart Number: 990419d.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB1 4/19/99 9:18 AM		CCB2 4/19/99 9:51 AM		CCB3 4/19/99 10:35 AM		CCB4 4/19/99 11:19 AM		CCB5 4/19/99 11:49 AM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Iron	259.94	100	100	U	100	U	100	U	100	U	100	U
Potassium	766.491	5000	5000	U	5000	U	5000	U	5000	U	5000	U
Sodium	330.223	5000	5000	U	5000	U	5000	U	5000	U	5000	U

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICP **Units:** ug/L

Chart Number: 990419d.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB6 4/19/99 12:34 PM		CCB7 4/19/99 1:18 PM		CCB8 4/19/99 1:56 PM		CCB9 4/19/99 2:45 PM		CCB10 4/19/99 3:14 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Iron	259.94	100	100	U	100	U	100	U	100	U	100	U
Potassium	766.491	5000	5000	U	5000	U	5000	U	5000	U	5000	U
Sodium	330.223	5000	5000	U	5000	U	5000	U	5000	U	5000	U

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPMS **Units:** ug/L

Chart Number: 041599.rep

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	QC Std 5 4/15/99 9:31 AM		QC Std 4 4/15/99 10:21 AM		QC Std 4 4/15/99 11:08 AM		QC Std 4 4/15/99 11:36 AM			
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Barium	135	1	1	U	1	U	1	U	1	U		
Chromium	52	1	1	U	1	U	1	U	1	U		
Cobalt	59	1	1	U	1	U	1	U	1	U		
Manganese	55	1	1	U	1	U	1	U	1	U		
Nickel	60	1	1	U	1	U	1	U	1	U		
Selenium	82	5	5	U	5	U	5	U	5	U		
Silver	107	1	1	U	1	U	1	U	1	U		
Thallium	205	1	1	U	1	U	1	U	1	U		
Vanadium	51	5	5	U	5	U	5	U	5	U		

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0416w.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB1 4/16/99 11:32 AM		CCB2 4/16/99 1:08 PM		CCB3 4/16/99 1:30 PM		CCB4 4/16/99 3:19 PM		CCB5 4/16/99 4:01 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U	100	U	100	U	100	U	100	U
Antimony	206.838	10	10	U	10	U	10	U	10	U	10	U
Arsenic	189.042	10	10	U	10	U	10	U	10	U	10	U
Beryllium	313.042	2	2	U	2	U	2	U	2	U	2	U
Cadmium	226.502	5	5	U	5	U	5	U	5	U	5	U
Calcium	317.933	200	200	U	200	U	200	U	200	U	200	U
Cobalt	228.616	10	10	U	10	U	10	U	10	U	10	U
Lead	220.353	3	3	U	3	U	3	U	3	U	3	U
Magnesium	279.078	200	200	U	200	U	200	U	200	U	200	U
Zinc	206.2	20	20	U	20	U	20	U	20	U	20	U

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0416w.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB6 4/16/99 5:12 PM Found	Q	CCB7 4/16/99 5:54 PM Found	Q	CCB8 4/16/99 6:18 PM Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U	100	U	**141**					
Antimony	206.838	10	10	U	10	U	10	U				
Arsenic	189.042	10	10	U	10	U	10	U				
Beryllium	313.042	2	2	U	2	U	2	U				
Cadmium	226.502	5	5	U	5	U	5	U				
Calcium	317.933	200	200	U	**237**		200	U				
Cobalt	228.616	10	10	U	10	U	10	U				
Lead	220.353	3	3	U	3	U	3	U				
Magnesium	279.078	200	200	U	200	U	200	U				
Zinc	206.2	20	20	U	20	U	20	U				

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0420w.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB1 4/20/99 9:57 AM		CCB2 4/20/99 10:40 AM		CCB3 4/20/99 11:52 AM		CCB4 4/20/99 12:27 PM		CCB5 4/20/99 1:28 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U	100	U	100	U	100	U	100	U
Antimony	206.838	10	10	U	10	U	10	U	10	U	10	U
Arsenic	189.042	10	10	U	10	U	10	U	10	U	10	U
Beryllium	313.042	2	2	U	2	U	2	U	2	U	2	U
Cadmium	226.502	5	5	U	5	U	5	U	5	U	5	U
Calcium	317.933	200	200	U	200	U	200	U	200	U	200	U
Cobalt	228.616	10	10	U	10	U	10	U	10	U	10	U
Lead	220.353	3	3	U	3	U	3	U	3	U	3	U
Magnesium	279.078	200	200	U	200	U	200	U	200	U	200	U
Zinc	206.2	20	20	U	20	U	20	U	20	U	20	U

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0420w.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB6 4/20/99 2:19 PM Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U								
Antimony	206.838	10	10	U								
Arsenic	189.042	10	10	U								
Beryllium	313.042	2	**2.6**									
Cadmium	226.502	5	5	U								
Calcium	317.933	200	**219**									
Cobalt	228.616	10	10	U								
Lead	220.353	3	3	U								
Magnesium	279.078	200	200	U								
Zinc	206.2	20	20	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB1 4/22/99 9:35 AM		CCB2 4/22/99 10:27 AM		CCB3 4/22/99 11:01 AM		CCB4 4/22/99 12:23 PM		CCB5 4/22/99 1:19 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U	100	U	100	U	100	U	100	U
Antimony	206.838	10	10	U	10	U	10	U	10	U	10	U
Arsenic	189.042	10	10	U	10	U	10	U	10	U	10	U
Beryllium	313.042	2	2	U	2	U	2	U	2	U	2	U
Cadmium	226.502	5	5	U	5	U	5	U	5	U	5	U
Calcium	317.933	200	200	U	200	U	200	U	200	U	200	U
Cobalt	228.616	10	10	U	10	U	10	U	10	U	10	U
Lead	220.353	3	3	U	3	U	3	U	3	U	3	U
Magnesium	279.078	200	200	U	200	U	200	U	200	U	200	U
Zinc	206.2	20	20	U	20	U	20	U	20	U	20	U

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB6 4/22/99 2:19 PM		CCB7 4/22/99 3:07 PM		CCB8 4/22/99 4:14 PM		CCB9 4/22/99 5:28 PM		CCB8 4/22/99 6:41 PM	
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U	100	U	100	U	100	U	100	U
Antimony	206.838	10	10	U	10	U	10	U	10	U	10	U
Arsenic	189.042	10	10	U	10	U	10	U	10	U	10	U
Beryllium	313.042	2	2	U	2	U	2	U	**3.2**		**3.1**	
Cadmium	226.502	5	5	U	5	U	5	U	5	U	5	U
Calcium	317.933	200	200	U	200	U	200	U	200	U	200	U
Cobalt	228.616	10	10	U	10	U	10	U	10	U	10	U
Lead	220.353	3	3	U	3	U	3	U	3	U	3	U
Magnesium	279.078	200	200	U	200	U	200	U	200	U	200	U
Zinc	206.2	20	20	U	20	U	20	U	20	U	20	U

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Continuing Calibration Blank Results

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	CCB9 4/22/99 7:24 PM		CCB10 4/22/99 7:55 PM							
			Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215	100	100	U	100	U						
Antimony	206.838	10	10	U	10	U						
Arsenic	189.042	10	10	U	10	U						
Beryllium	313.042	2	**3.1**		**2.6**							
Cadmium	226.502	5	5	U	5	U						
Calcium	317.933	200	200	U	200	U						
Cobalt	228.616	10	10	U	10	U						
Lead	220.353	3	3	U	3	U						
Magnesium	279.078	200	200	U	200	U						
Zinc	206.2	20	20	U	20	U						

U Result is less than the IDL

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D9D120000-157	**Prep Batch #...:** 9102157					
Mercury	ND	0.033	mg/kg	SW846 7471A	04/13-04/14/99	CTH50101
MB Lot-Sample #: D9D130000-166	**Prep Batch #...:** 9103166					
Barium	**0.055 B**	**0.10**	**mg/kg**	**SW846 6020**	**04/13-04/15/99**	**CTJ6E102**
Chromium	ND	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTJ6E104
Cobalt	ND	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTJ6E103
Manganese	**0.059 B**	**0.10**	**mg/kg**	**SW846 6020**	**04/13-04/15/99**	**CTJ6E105**
Nickel	**0.021 B**	**0.10**	**mg/kg**	**SW846 6020**	**04/13-04/15/99**	**CTJ6E106**
Selenium	ND	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTJ6E107
Silver	ND	0.010	mg/kg	SW846 6020	04/13-04/15/99	CTJ6E101
Thallium	ND	0.10	mg/kg	SW846 6020	04/13-04/15/99	CTJ6E108
Vanadium	ND	0.50	mg/kg	SW846 6020	04/13-04/15/99	CTJ6E109
MB Lot-Sample #: D9D130000-164	**Prep Batch #...:** 9103164					
Aluminum	ND	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTJ69105
Arsenic	ND	10.0	mg/kg	SW846 6010B	04/13-04/16/99	CTJ69106
Beryllium	ND	0.20	mg/kg	SW846 6010B	04/13-04/16/99	CTJ69107
Calcium	**8.1 B**	**10.0**	**mg/kg**	**SW846 6010B**	**04/13-04/16/99**	**CTJ69108**
Cadmium	ND	0.50	mg/kg	SW846 6010B	04/13-04/16/99	CTJ69109
Copper	ND	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTJ6910A
Iron	**1.9 B**	**10.0**	**mg/kg**	**SW846 6010B**	**04/13-04/19/99**	**CTJ6910C**
Potassium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTJ6910D
Magnesium	ND	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTJ6910E
Sodium	ND	500	mg/kg	SW846 6010B	04/13-04/19/99	CTJ69101
Lead	ND	5.0	mg/kg	SW846 6010B	04/13-04/16/99	CTJ69102
Antimony	ND	6.0	mg/kg	SW846 6010B	04/13-04/16/99	CTJ69103
Zinc	ND	2.0	mg/kg	SW846 6010B	04/13-04/16/99	CTJ69104
MB Lot-Sample #: D9D150000-203	**Prep Batch #...:** 9105203					
Mercury	ND	0.033	mg/kg	SW846 7471A	04/15-04/16/99	CTM30101
MB Lot-Sample #: D9D260000-195	**Prep Batch #...:** 9116195					
Mercury	ND	0.033	mg/kg	SW846 7471A	04/27-04/28/99	CV3CD101

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

FORM 3
Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICP **Units:** ug/L

Chart Number: 990419d.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	True Conc	ICSA 4/19/99 9:07 AM									
				Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215		500000	492000									
Calcium	317.933		500000	468000									
Iron	259.94		200000	182000									
Magnesium	279.079		500000	514000									
Potassium	766.491	5000		5000	U								
Sodium	330.223	5000		5000	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPMS **Units:** ug/L

Chart Number: 041599.rep

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	True Conc	ICSA 4/15/99 9:10 AM		ICSA 4/15/99 9:16 AM							
				Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Barium	135	1		1.6		98.9							
Chromium	52	1		8.3		102							
Cobalt	59	1		1	U	93.9							
Manganese	55	1		2.9		96.9							
Nickel	60	1		2.8		92.6							
Selenium	82	5		5	U	103							
Silver	107	1		1	U	92.8							
Thallium	205	1		1	U	98.3							
Vanadium	51	5		5	U	95.9							

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPST **Units:** ug/L

Chart Number: 0416w.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	True Conc	ICSA 4/16/99 11:18 AM Found	Q	ICSA 4/16/99 6:00 PM Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215		500000	491000		476000							
Antimony	206.838	10		10	U	10	U						
Arsenic	189.042	10		10	U	10	U						
Beryllium	313.042	2		2	U	2	U						
Cadmium	226.502	5		5	U	5	U						
Calcium	317.933		500000	488000		472000							
Cobalt	228.616	10		10	U	10	U						
Iron	271.441		200000	191000		183000							
Lead	220.353	3		5.6		3.8							
Magnesium	279.078		500000	557000		533000							
Zinc	206.2	20		20	U	20	U						

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPST **Units:** ug/L

Chart Number: 0420w.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	True Conc	ICSA 4/20/99 9:33 AM									
				Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215		500000	496000									
Antimony	206.838	10		11									
Arsenic	189.042	10		10	U								
Beryllium	313.042	2		2	U								
Cadmium	226.502	5		5	U								
Calcium	317.933		500000	485000									
Cobalt	228.616	10		10	U								
Iron	271.441		200000	192000									
Lead	220.353	3		3	U								
Magnesium	279.078		500000	552000									
Zinc	206.2	20		20	U								

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard A

Instrument: ICPST **Units:** ug/L

Chart Number: 0422w1.arc

Standard Source: **Standard ID:**

Element	WL/ Mass	Report Limit	True Conc	ICSA 4/22/99 9:22 AM		ICSA 4/22/99 2:47 PM		ICSA 4/22/99 7:31 PM					
				Found	Q	Found	Q	Found	Q	Found	Q	Found	Q
Aluminum	308.215		500000	493000		488000		482000					
Antimony	206.838	10		10	U	10	U	10	U				
Arsenic	189.042	10		10	U	10	U	10	U				
Beryllium	313.042	2		2	U	2	U	2	U				
Cadmium	226.502	5		5	U	5	U	5	U				
Calcium	317.933		500000	482000		483000		630000	R				
Cobalt	228.616	10		10	U	10	U	10	U				
Iron	271.441		200000	191000		190000		224000					
Lead	220.353	3		3	U	3	U	3	U				
Magnesium	279.078		500000	551000		550000		687000	R				
Zinc	206.2	20		20	U	20	U	20	U				

U Result is less than the IDL

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICP

Units: ug/L

Chart Number: 990419d.arc

Acceptable Range: 80% - 120%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	ICSAB 4/19/99 9:11 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	500000	491260	98.3								
Calcium	317.933	500000	470410	94.1								
Iron	259.94	200000	181910	91.0								
Magnesium	279.079	500000	511550	102.3								
Potassium	766.491	50000	49675	99.3								
Sodium	330.223	50000	48795	97.6								

B Result is between CRDL and IDL
U Result is less than the IDL
R Spike recovery failed

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPMS

Units: ug/L

Chart Number: 041599.rep

Acceptable Range: 70% - 130%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	ICSAB 4/15/99 9:16 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Barium	135	100	98.85	**98.8**								
Chromium	52	100	102.04	**102.0**								
Cobalt	59	100	93.901	**93.9**								
Manganese	55	100	96.926	**96.9**								
Nickel	60	100	92.603	**92.6**								
Selenium	82	100	102.95	**102.9**								
Silver	107	100	92.836	**92.8**								
Thallium	205	100	98.333	**98.3**								
Vanadium	51	100	95.892	**95.9**								

B Result is between CRDL and IDL
U Result is less than the IDL
R Spike recovery failed

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPST

Units: ug/L

Chart Number: 0416w.arc

Acceptable Range: 80% - 120%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	ICSAB 4/16/99 11:23 AM Found	% Rec	ICSAB 4/16/99 6:06 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	500000	488090	97.6	476470	95.3						
Antimony	206.838	1000	1021.5	102.1	996.76	99.7						
Arsenic	189.042	2000	2091.8	104.6	2035.4	101.8						
Beryllium	313.042	500	532.8	106.6	521.25	104.3						
Cadmium	226.502	1000	1027.6	102.8	1001.1	100.1						
Calcium	317.933	500000	486450	97.3	474360	94.9						
Cobalt	228.616	500	498.78	99.8	478.74	95.7						
Iron	271.441	200000	189690	94.8	184120	92.1						
Lead	220.353	1000	1050	105.0	1015.4	101.5						
Magnesium	279.078	500000	551220	110.2	533420	106.7						
Zinc	206.2	1000	996.52	99.7	940.29	94.0						

B Result is between CRDL and IDL
U Result is less than the IDL
R Spike recovery failed

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPST

Units: ug/L

Chart Number: 0420w.arc

Acceptable Range: 80% - 120%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	ICSAB 4/20/99 9:38 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	500000	495590	99.1								
Arsenic	189.042	2000	2120.2	106.0								
Beryllium	313.042	500	539.72	107.9								
Cadmium	226.502	1000	1039.2	103.9								
Calcium	317.933	500000	485390	97.1								
Cobalt	228.616	500	506.87	101.4								
Iron	271.441	200000	191880	95.9								
Lead	220.353	1000	1067.2	106.7								
Magnesium	279.078	500000	549700	109.9								
Zinc	206.2	1000	1007.7	100.8								

B Result is between CRDL and IDL
U Result is less than the IDL
R Spike recovery failed

Quanterra, Inc.

Metals Data Reporting Form

Interference Check Standard AB

Instrument: ICPST

Units: ug/L

Chart Number: 0422w1.arc

Acceptable Range: 80% - 120%

Standard Source:

Standard ID:

Element	WL/ Mass	True Conc	ICSAB 4/22/99 9:26 AM		ICSAB 4/22/99 2:51 PM		ICSAB 4/22/99 7:37 PM					
			Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Aluminum	308.215	500000	493420	98.7	494080	98.8	481110	96.2				
Antimony	206.838	1000	1015.3	101.5	1019	101.9	1022.9	102.3				
Arsenic	189.042	2000	2019.7	101.0	2038.2	101.9	2262.1	113.1				
Beryllium	313.042	500	517.99	103.6	526.36	105.3	618.21	123.6				
Cadmium	226.502	1000	996.1	99.6	999.2	99.9	1264.5	126.5				
Calcium	317.933	500000	483320	96.7	488620	97.7	631460	126.3				
Cobalt	228.616	500	484.9	97.0	489.01	97.8	567.66	113.5				
Iron	271.441	200000	190930	95.5	192370	96.2	224130	112.1				
Lead	220.353	1000	1019.4	101.9	1024.4	102.4	1236.6	123.7				
Magnesium	279.078	500000	550810	110.2	553940	110.8	686200	137.2				
Zinc	206.2	1000	968.15	96.8	968.37	96.8	1379.2	137.9				

B Result is between CRDL and IDL
U Result is less than the IDL
R Spike recovery failed

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID
Date Sampled...: 04/01/99 **Date Received..:** 04/09/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9D100118-002 **Prep Batch #...:** 9103164									
Aluminum									
	7870	200	12200	mg/kg			SW846 6010B	04/13-04/20/99	CTGKX113
			Qualifiers: NC,MSB						
	7870	200	11800	mg/kg			SW846 6010B	04/13-04/20/99	CTGKX114
			Qualifiers: NC,MSB						
Arsenic									
	8890	200	7970	mg/kg			SW846 6010B	04/13-04/20/99	CTGKX115
			Qualifiers: NC,MSB						
	8890	200	7980	mg/kg			SW846 6010B	04/13-04/20/99	CTGKX116
			Qualifiers: NC,MSB						
Beryllium									
	0.85	5.00	6.07	mg/kg	104		SW846 6010B	04/13-04/20/99	CTGKX117
	0.85	5.00	6.05	mg/kg	104	0.33	SW846 6010B	04/13-04/20/99	CTGKX118
Calcium									
	6540	5000	11300	mg/kg	96		SW846 6010B	04/13-04/20/99	CTGKX119
	6540	5000	10900	mg/kg	88	3.7	SW846 6010B	04/13-04/20/99	CTGKX11A
Cadmium									
	12.5	5.00	17.1	mg/kg	93		SW846 6010B	04/13-04/20/99	CTGKX11C
	12.5	5.00	16.6	mg/kg	83	3.0	SW846 6010B	04/13-04/20/99	CTGKX11D
Copper									
	42.5	25.0	65.3	mg/kg	91		SW846 6010B	04/13-04/20/99	CTGKX11E
	42.5	25.0	63.3 N	mg/kg	83	3.1	SW846 6010B	04/13-04/20/99	CTGKX11F
Iron									
	14500	100	15300	mg/kg			SW846 6010B	04/13-04/19/99	CTGKX11G
			Qualifiers: NC,MSB						
	14500	100	15000	mg/kg			SW846 6010B	04/13-04/19/99	CTGKX11H
			Qualifiers: NC,MSB						
Potassium									
	2440	5000	7500	mg/kg	101		SW846 6010B	04/13-04/19/99	CTGKX11J
	2440	5000	7380	mg/kg	99	1.5	SW846 6010B	04/13-04/19/99	CTGKX11K
Magnesium									
	2670	5000	7990	mg/kg	106		SW846 6010B	04/13-04/20/99	CTGKX11L
	2670	5000	7810	mg/kg	103	2.2	SW846 6010B	04/13-04/20/99	CTGKX11M
Sodium									
	ND	5000	4820	mg/kg	96		SW846 6010B	04/13-04/19/99	CTGKX10T
	ND	5000	4820	mg/kg	96	0.06	SW846 6010B	04/13-04/19/99	CTGKX10U
Lead									
	1870	50.0	1900	mg/kg			SW846 6010B	04/13-04/20/99	CTGKX10V
			Qualifiers: NC,MSB						
	1870	50.0	1780	mg/kg			SW846 6010B	04/13-04/20/99	CTGKX10W
			Qualifiers: NC,MSB						
Antimony									
	42.2	50.0	82.0 N	mg/kg	80		SW846 6010B	04/13-04/20/99	CTGKX10X
	42.2	50.0	80.3 N	mg/kg	76	2.1	SW846 6010B	04/13-04/20/99	CTGKX110

(Continued on next page)

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID
Date Sampled...: 04/01/99 **Date Received..:** 04/09/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc									
	278	50.0	314	mg/kg			SW846 6010B	04/13-04/20/99	CTGKX111
				Qualifiers: NC,MSB					
	278	50.0	301	mg/kg			SW846 6010B	04/13-04/20/99	CTGKX112
				Qualifiers: NC,MSB					
MS Lot-Sample #: D9D100118-002 **Prep Batch #...:** 9103166									
Barium									
	155	20.0	183	mg/kg			SW846 6020	04/13-04/15/99	CTGKX11Q
				Qualifiers: NC,MSB					
	155	20.0	181	mg/kg			SW846 6020	04/13-04/15/99	CTGKX11R
				Qualifiers: NC,MSB					
Chromium									
	21.0	20.0	39.2	mg/kg	91		SW846 6020	04/13-04/15/99	CTGKX11V
	21.0	20.0	39.1	mg/kg	90	0.42	SW846 6020	04/13-04/15/99	CTGKX11W
Cobalt									
	3.8	20.0	22.4	mg/kg	93		SW846 6020	04/13-04/15/99	CTGKX11T
	3.8	20.0	21.9	mg/kg	90	2.2	SW846 6020	04/13-04/15/99	CTGKX11U
Manganese									
	186	20.0	208	mg/kg			SW846 6020	04/13-04/15/99	CTGKX11X
				Qualifiers: NC,MSB					
	186	20.0	207	mg/kg			SW846 6020	04/13-04/15/99	CTGKX120
				Qualifiers: NC,MSB					
Nickel									
	9.7	20.0	27.9	mg/kg	91		SW846 6020	04/13-04/15/99	CTGKX121
	9.7	20.0	27.4	mg/kg	88	1.9	SW846 6020	04/13-04/15/99	CTGKX122
Selenium									
	4.5	20.0	25.1	mg/kg	103		SW846 6020	04/13-04/15/99	CTGKX123
	4.5	20.0	24.4	mg/kg	99	3.0	SW846 6020	04/13-04/15/99	CTGKX124
Silver									
	0.44	20.0	12.6 N	mg/kg	61		SW846 6020	04/13-04/15/99	CTGKX11N
	0.44	20.0	11.8 N	mg/kg	57	6.6	SW846 6020	04/13-04/15/99	CTGKX11P
Thallium									
	0.63	20.0	17.6	mg/kg	85		SW846 6020	04/13-04/15/99	CTGKX125
	0.63	20.0	17.2	mg/kg	83	2.2	SW846 6020	04/13-04/15/99	CTGKX126
Vanadium									
	20.9	20.0	38.9	mg/kg	90		SW846 6020	04/13-04/15/99	CTGKX127
	20.9	20.0	39.1	mg/kg	91	0.37	SW846 6020	04/13-04/15/99	CTGKX128
MS Lot-Sample #: D9D100118-002 **Prep Batch #...:** 9105203									
Mercury									
	11.4	2.50	13.9	mg/kg			SW846 7471A	04/15-04/16/99	CTGKX129
				Qualifiers: NC,MSB					
	11.4	2.50	14.5	mg/kg			SW846 7471A	04/15-04/16/99	CTGKX12A
				Qualifiers: NC,MSB					

(Continued on next page)

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID
Date Sampled...: 04/01/99 **Date Received..:** 04/09/99

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID
Date Sampled...: 04/23/99 **Date Received..:** 04/24/99

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9D230155-004 **Prep Batch #...:** 9116195									
Mercury									
	ND	0.417	0.322 N	mg/kg	77		SW846 7471A	04/27-04/28/99	CV28V11U
	ND	0.417	0.353	mg/kg	85	9.1	SW846 7471A	04/27-04/28/99	CV28V11V

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID
Date Sampled...: 04/01/99 **Date Received..:** 04/09/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9D100118-002 Prep Batch #...: 9103164							
Aluminum	NC,MSB	(88 - 120)			SW846 6010B	04/13-04/20/99	CTGKX113
	NC,MSB	(88 - 120)		(0-10)	SW846 6010B	04/13-04/20/99	CTGKX114
Arsenic	NC,MSB	(80 - 120)			SW846 6010B	04/13-04/20/99	CTGKX115
	NC,MSB	(80 - 120)		(0-10)	SW846 6010B	04/13-04/20/99	CTGKX116
Beryllium	104	(78 - 118)			SW846 6010B	04/13-04/20/99	CTGKX117
	104	(78 - 118)	0.33	(0-10)	SW846 6010B	04/13-04/20/99	CTGKX118
Calcium	96	(85 - 114)			SW846 6010B	04/13-04/20/99	CTGKX119
	88	(85 - 114)	3.7	(0-10)	SW846 6010B	04/13-04/20/99	CTGKX11A
Cadmium	93	(80 - 120)			SW846 6010B	04/13-04/20/99	CTGKX11C
	83	(80 - 120)	3.0	(0-16)	SW846 6010B	04/13-04/20/99	CTGKX11D
Copper	91	(84 - 115)			SW846 6010B	04/13-04/20/99	CTGKX11E
	83 N	(84 - 115)	3.1	(0-10)	SW846 6010B	04/13-04/20/99	CTGKX11F
Iron	NC,MSB	(87 - 117)			SW846 6010B	04/13-04/19/99	CTGKX11G
	NC,MSB	(87 - 117)		(0-10)	SW846 6010B	04/13-04/19/99	CTGKX11H
Potassium	101	(82 - 110)			SW846 6010B	04/13-04/19/99	CTGKX11J
	99	(82 - 110)	1.5	(0-10)	SW846 6010B	04/13-04/19/99	CTGKX11K
Magnesium	106	(84 - 113)			SW846 6010B	04/13-04/20/99	CTGKX11L
	103	(84 - 113)	2.2	(0-10)	SW846 6010B	04/13-04/20/99	CTGKX11M
Sodium	96	(85 - 117)			SW846 6010B	04/13-04/19/99	CTGKX10T
	96	(85 - 117)	0.06	(0-10)	SW846 6010B	04/13-04/19/99	CTGKX10U
Lead	NC,MSB	(82 - 114)			SW846 6010B	04/13-04/20/99	CTGKX10V
	NC,MSB	(82 - 114)		(0-11)	SW846 6010B	04/13-04/20/99	CTGKX10W
Antimony	80 N	(82 - 113)			SW846 6010B	04/13-04/20/99	CTGKX10X
	76 N	(82 - 113)	2.1	(0-10)	SW846 6010B	04/13-04/20/99	CTGKX110
Zinc	NC,MSB	(80 - 120)			SW846 6010B	04/13-04/20/99	CTGKX111
	NC,MSB	(80 - 120)		(0-10)	SW846 6010B	04/13-04/20/99	CTGKX112
MS Lot-Sample #: D9D100118-002 Prep Batch #...: 9103166							
Barium	NC,MSB	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX11Q
	NC,MSB	(70 - 130)		(0-20)	SW846 6020	04/13-04/15/99	CTGKX11R
Chromium	91	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX11V
	90	(70 - 130)	0.42	(0-20)	SW846 6020	04/13-04/15/99	CTGKX11W
Cobalt	93	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX11T
	90	(70 - 130)	2.2	(0-20)	SW846 6020	04/13-04/15/99	CTGKX11U
Manganese	NC,MSB	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX11X
	NC,MSB	(70 - 130)		(0-20)	SW846 6020	04/13-04/15/99	CTGKX120
Nickel	91	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX121
	88	(70 - 130)	1.9	(0-20)	SW846 6020	04/13-04/15/99	CTGKX122
Selenium	103	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX123
	99	(70 - 130)	3.0	(0-20)	SW846 6020	04/13-04/15/99	CTGKX124
Silver	61 N	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX11N
	57 N	(70 - 130)	6.6	(0-20)	SW846 6020	04/13-04/15/99	CTGKX11P
Thallium	85	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX125
	83	(70 - 130)	2.2	(0-20)	SW846 6020	04/13-04/15/99	CTGKX126

(Continued on next page)

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID
Date Sampled...: 04/01/99 **Date Received..:** 04/09/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium	90	(70 - 130)			SW846 6020	04/13-04/15/99	CTGKX127
	91	(70 - 130)	0.37	(0-20)	SW846 6020	04/13-04/15/99	CTGKX128

MS Lot-Sample #: D9D100118-002 **Prep Batch #...:** 9105203

Mercury	NC,MSB	(82 - 114)			SW846 7471A	04/15-04/16/99	CTGKX129
	NC,MSB	(82 - 114)		(0-10)	SW846 7471A	04/15-04/16/99	CTGKX12A

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

FORM 5A
Equivalent

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID
Date Sampled...: 04/23/99 **Date Received..:** 04/24/99

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D9D230155-004 **Prep Batch #...:** 9116195							
Mercury	77 N	(82 - 114)			SW846 7471A	04/27-04/28/99	CV28V11U
	85	(82 - 114)	9.1	(0-10)	SW846 7471A	04/27-04/28/99	CV28V11V

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

FORM 5A
Equivalent

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Lot-Sample #...: D9D100118 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Mercury	0.417	0.437	mg/kg	105		SW846 7471A	04/13-04/14/99	9102157
	0.417	0.428	mg/kg	103	2.2	SW846 7471A	04/13-04/14/99	9102157
Mercury	0.417	0.421	mg/kg	101		SW846 7471A	04/15-04/16/99	9105203
	0.417	0.414	mg/kg	99	1.8	SW846 7471A	04/15-04/16/99	9105203
Mercury	0.417	0.401	mg/kg	96		SW846 7471A	04/27-04/28/99	9116195
	0.417	0.428	mg/kg	103	6.6	SW846 7471A	04/27-04/28/99	9116195

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

FORM 7
Equivalent

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Lot-Sample #...: D9D100118 Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Mercury	105	(82 - 114)			SW846 7471A	04/13-04/14/99	9102157
	103	(82 - 114)	2.2	(0-10)	SW846 7471A	04/13-04/14/99	9102157
Mercury	101	(82 - 114)			SW846 7471A	04/15-04/16/99	9105203
	99	(82 - 114)	1.8	(0-10)	SW846 7471A	04/15-04/16/99	9105203
Mercury	96	(82 - 114)			SW846 7471A	04/27-04/28/99	9116195
	103	(82 - 114)	6.6	(0-10)	SW846 7471A	04/27-04/28/99	9116195

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

FORM 7
Equivalent

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: D9D130000-164 Prep Batch #...: 9103164							
Sodium	2500	2820	mg/kg	113	SW846 6010B	04/13-04/19/99	CTJ6910F
Lead	25.0	28.4	mg/kg	113	SW846 6010B	04/13-04/16/99	CTJ6910G
Antimony	25.0	26.0	mg/kg	104	SW846 6010B	04/13-04/16/99	CTJ6910H
Zinc	25.0	28.6	mg/kg	114	SW846 6010B	04/13-04/16/99	CTJ6910J
Aluminum	100	112	mg/kg	112	SW846 6010B	04/13-04/16/99	CTJ6910K
Arsenic	100	110	mg/kg	110	SW846 6010B	04/13-04/16/99	CTJ6910L
Beryllium	2.50	3.09 N	mg/kg	124	SW846 6010B	04/13-04/16/99	CTJ6910M
Calcium	2500	2850	mg/kg	114	SW846 6010B	04/13-04/16/99	CTJ6910N
Cadmium	2.50	2.95	mg/kg	118	SW846 6010B	04/13-04/16/99	CTJ6910P
Copper	12.5	13.7	mg/kg	110	SW846 6010B	04/13-04/16/99	CTJ6910Q
Iron	50.0	61.0 N	mg/kg	122	SW846 6010B	04/13-04/19/99	CTJ6910R
Potassium	2500	2710	mg/kg	108	SW846 6010B	04/13-04/19/99	CTJ6910T
Magnesium	2500	2960 N	mg/kg	118	SW846 6010B	04/13-04/16/99	CTJ6910U
LCS Lot-Sample#: D9D130000-166 Prep Batch #...: 9103166							
Silver	20.0	18.5	mg/kg	93	SW846 6020	04/13-04/15/99	CTJ6E10A
Barium	20.0	19.6	mg/kg	98	SW846 6020	04/13-04/15/99	CTJ6E10C
Cobalt	20.0	19.1	mg/kg	95	SW846 6020	04/13-04/15/99	CTJ6E10D
Chromium	20.0	19.4	mg/kg	97	SW846 6020	04/13-04/15/99	CTJ6E10E
Manganese	20.0	19.3	mg/kg	96	SW846 6020	04/13-04/15/99	CTJ6E10F
Nickel	20.0	19.0	mg/kg	95	SW846 6020	04/13-04/15/99	CTJ6E10G
Selenium	20.0	20.2	mg/kg	101	SW846 6020	04/13-04/15/99	CTJ6E10H
Thallium	20.0	19.6	mg/kg	98	SW846 6020	04/13-04/15/99	CTJ6E10J
Vanadium	20.0	19.4	mg/kg	97	SW846 6020	04/13-04/15/99	CTJ6E10K

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

FORM 7
Equivalent

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D9D100118 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: D9D130000-164		**Prep Batch #...:** 9103164			
Sodium	113	(85 - 117)	SW846 6010B	04/13-04/19/99	CTJ6910F
Lead	113	(82 - 114)	SW846 6010B	04/13-04/16/99	CTJ6910G
Antimony	104	(82 - 113)	SW846 6010B	04/13-04/16/99	CTJ6910H
Zinc	114	(80 - 120)	SW846 6010B	04/13-04/16/99	CTJ6910J
Aluminum	112	(88 - 120)	SW846 6010B	04/13-04/16/99	CTJ6910K
Arsenic	110	(80 - 120)	SW846 6010B	04/13-04/16/99	CTJ6910L
Beryllium	124 N	(78 - 118)	SW846 6010B	04/13-04/16/99	CTJ6910M
Calcium	114	(85 - 114)	SW846 6010B	04/13-04/16/99	CTJ6910N
Cadmium	118	(80 - 120)	SW846 6010B	04/13-04/16/99	CTJ6910P
Copper	110	(84 - 115)	SW846 6010B	04/13-04/16/99	CTJ6910Q
Iron	122 N	(87 - 117)	SW846 6010B	04/13-04/19/99	CTJ6910R
Potassium	108	(82 - 110)	SW846 6010B	04/13-04/19/99	CTJ6910T
Magnesium	118 N	(84 - 113)	SW846 6010B	04/13-04/16/99	CTJ6910U
LCS Lot-Sample#: D9D130000-166		**Prep Batch #...:** 9103166			
Silver	93	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10A
Barium	98	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10C
Cobalt	95	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10D
Chromium	97	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10E
Manganese	96	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10F
Nickel	95	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10G
Selenium	101	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10H
Thallium	98	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10J
Vanadium	97	(70 - 130)	SW846 6020	04/13-04/15/99	CTJ6E10K

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

FORM 7
Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Serial Dilution Report

Serial Dilution Sample ID: CTGKXP

Original Sample ID: CTGKX **Client ID:** ND-98-782

Matrix: Solid **Units:** ug/kg **Prep Date:** 4/13/99 **Prep Batch:** 9103164

Weight: 1 **Volume:** 100 **Percent Moisture:** 0

Element	WL/ Mass	OS Conc	Q	Serial Dilution Conc	Q	Percent Diff	OS DF	Ser Dil DF	Instr	OS Anal Date	OS Anal Time	Ser Dil Anal Date	Ser Dil Anal Time
Aluminum	308.215	663000		693000		4.4 %	100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Aluminum	308.215	787000		802000		2.0 %	500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Antimony	206.838	3430		3620		5.5 %	100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Antimony	206.838	4220		4520		7.1 %	500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Arsenic	189.042	681000		780000	*	14.5 %	100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Arsenic	189.042	889000		918000		3.3 %	500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Beryllium	313.042	100	U	500	U		500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Beryllium	313.042	57.1		100	U		100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Cadmium	226.502	1250		1290		3.2 %	500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Cadmium	226.502	1020		1110		8.8 %	100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Calcium	317.933	549000		593000		8.0 %	100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Calcium	317.933	654000		664000		1.6 %	500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Cobalt	228.616	435		500	U		100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Cobalt	228.616	564		2500	U		500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Iron	259.94	1450000		1530000		5.8 %	100	500	ICP	4/19/99	14:20	4/19/99	14:23
Lead	220.353	187000		190000		1.5 %	500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Lead	220.353	154000		165000		7.1 %	100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Magnesium	279.078	267000		270000		1.1 %	500	2500	ICPST	4/20/99	10:10	4/20/99	10:19
Magnesium	279.078	222000		240000		8.0 %	100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Potassium	766.491	244000		252000		3.3 %	100	500	ICP	4/19/99	14:20	4/19/99	14:23
Sodium	330.223	50000	U	250000	U		100	500	ICP	4/19/99	14:20	4/19/99	14:23
Zinc	206.2	22500		24600		9.1 %	100	500	ICPST	4/16/99	14:29	4/16/99	14:34
Zinc	206.2	27800		27800		0.0 %	500	2500	ICPST	4/20/99	10:10	4/20/99	10:19

Comments:

Version 2.30

B Result is between CRDL and IDL
U Result is less than the IDL
* Duplicate analysis RPD was not within limits

Form 9 Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Serial Dilution Report

Serial Dilution Sample ID: CTGKX L

Original Sample ID: CTGKX **Client ID:** ND-98-782

Matrix: Solid **Units:** ug/kg **Prep Date:** 4/13/99 **Prep Batch:** 9103166

Weight: 1.00 **Volume:** 100 **Percent Moisture:** 0

Element	WL/ Mass	OS Conc	Q	Serial Dilution Conc	Q	Percent Diff	OS DF	Ser Dil DF	Instr	OS Anal Date	OS Anal Time	Ser Dil Anal Date	Ser Dil Anal Time
Barium	135	155		160		3.4%	1	5	ICPMS	4/15/99	9:50	4/15/99	9:55
Chromium	52	21		20.8		0.9%	1	5	ICPMS	4/15/99	9:50	4/15/99	9:55
Cobalt	59	3.8		3.7			1	5	ICPMS	4/15/99	9:50	4/15/99	9:55
Manganese	55	186		189		1.2%	1	5	ICPMS	4/15/99	9:50	4/15/99	9:55
Nickel	60	9.7		9.5		1.7%	1	5	ICPMS	4/15/99	9:50	4/15/99	9:55
Selenium	82	4.5		4.1			1	5	ICPMS	4/15/99	9:50	4/15/99	9:55
Silver	107	0.44		0.5	U		1	5	ICPMS	4/15/99	9:50	4/15/99	9:55
Thallium	205	0.63		0.65			1	5	ICPMS	4/15/99	9:50	4/15/99	9:55
Vanadium	51	20.9		20.9			1	5	ICPMS	4/15/99	9:50	4/15/99	9:55

Comments: Serial Dilution 5x

Version 2.30

B Result is between CRDL and IDL
U Result is less than the IDL
* Duplicate analysis RPD was not within limits

Form 9 Equivalent

Quanterra, Inc.

Metals Data Reporting Form

Instrument Detection Limits

Instrument: CVAA **Units:** ug/L

Element	Wavelength /Mass	Reporting Limit	IDL	Date of IDL
Mercury	253.70	0.2	0.022	3/30/99

Quanterra, Inc.

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICP **Units:** ug/L

Element	Wavelength /Mass	Reporting Limit	IDL	Date of IDL
Iron	259.94	100	4.9	2/1/99
Potassium	766.49	5000	411.9	2/1/99
Sodium	330.22	5000	1158.6	2/1/99

Quanterra, Inc.

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPMS **Units:** ug/L

Element	Wavelength /Mass	Reporting Limit	IDL	Date of IDL
Barium	135.00	1	0.0286	2/1/99
Chromium	52.00	1	0.0566	2/1/99
Cobalt	59.00	1	0.0045	2/1/99
Manganese	55.00	1	0.0328	2/1/99
Nickel	60.00	1	0.1239	2/1/99
Selenium	82.00	5	0.1905	2/1/99
Silver	109.00	1	0.014	2/1/99
Thallium	205.00	1	0.0064	2/1/99
Vanadium	51.00	5	0.1436	2/1/99

Quanterra, Inc.

Metals Data Reporting Form

Instrument Detection Limits

Instrument: ICPST **Units:** ug/L

Element	Wavelength /Mass	Reporting Limit	IDL	Date of IDL
Aluminum	308.21	100	14.7	2/1/99
Antimony	206.84	10	3.1	2/1/99
Arsenic	189.04	10	2.1	2/1/99
Beryllium	313.04	2	0.3	2/1/99
Cadmium	226.50	5	0.2	2/1/99
Calcium	317.93	200	5.1	2/1/99
Copper	324.75	20	1.2	2/1/99
Lead	220.35	3	1.1	2/1/99
Magnesium	279.08	200	4.4	2/1/99
Zinc	206.20	20	0.5	2/1/99

Quanterra, Inc.

Metals Data Reporting Form

Inter-Element Correction Factors

Instrument: ICP **Date of IEC's:** 3/15/99

Interfering Element	Wavelength /Mass	Correction Factor(s)
Aluminum	308.215	As(0.00036471), Cr(0.00005841), Fe(0.00019529), Mn(0.00001429), Mo(0.00002983), Pb(0.00010818), Sb(-0.00006105), Se(0.00022209)
Antimony	206.838	As(0.0010031)
Arsenic	193.696	Cd(0.0001126)
Beryllium	313.042	Cd(-0.00102), Se(0.0004756)
Cadmium	228.802	Co(-0.0001463)
Calcium	317.933	Ti(-0.0000243)
Chromium	267.716	Co(-0.0001018), Pb(-0.0006316), Sb(-0.0006178), V(0.0003368)
Cobalt	228.616	Cd(-0.0000801), Cu(0.0001752), Pb(0.0012189), Sb(0.0009385)
Iron	259.94	Se(-0.000409), V(0.0000289)
Magensium	279.079	Mo(0.00003424), Pb(-0.00006109)
Molybdenum	202.03	Mg(0.002773), Sb(0.0014288)
Tin	189.989	Sb(-0.0029703), Si(0.074203)
Titanium	334.941	Na(0.17511), Si(0.013315)
Vanadium	292.402	Al(0.0016554), As(0.0021326), Be(0.0016364), Cd(-607), Sb(-0.000811)
Zinc	213.856	Na(-0.13259)

Quanterra, Inc.

Metals Data Reporting Form

Inter-Element Correction Factors

Instrument: ICPST **Date of IEC's:** 3/15/99

Interfering Element	Wavelength /Mass	Correction Factor(s)
Aluminum	308.215	Cr(0.00006195), Fe(0.0002239), Mo(0.0000233), Pb(-0.0003166), Se(0.00002274)
Barium	493.409	Co(-0.001394), Se(-0.0000552)
Beryllium	313.042	Se(0.0004756)
Chromium	267.716	Sb(-0.0012014), Se(-0.0001098), Zn(-0.002006)
Cobalt	228.616	Fe(-0.003298), Pb(-0.001509), Tl(0.001603)
Copper	324.753	Se(0.0000426)
Iron	271.441	Cd(-0.00001565), Cu(-0.00001612), Pb(-0.00001471), Sb(0.00001916), Se(-0.00003817), V(0.00002067)
Magnesium	279.078	Fe(0.00052034), Zn(0.00002592)
Manganese	257.61	Pb(0.000243), Se(0.0004394), Tl(-0.0002852)
Molybdenum	202.03	Al(0.007705), Cu(0.0005305), Pb(0.0003825), Sb(-0.0133), Se(0.0005155)
Nickel	231.604	Co(0.0002102), Pb(0.0000984)

Quanterra, Inc.

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: CVAA **Units:** ug/L

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Mercury	253.70	10	3/30/99

Quanterra, Inc.

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICP **Units:** ug/L

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Iron	259.94	500000	3/15/99
Potassium	766.49	1000000	3/15/99
Sodium	330.22	10000000	3/15/99

Quanterra, Inc.

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICPMS **Units:** ug/L

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Barium	135.00	2000	2/15/98
Cobalt	59.00	1000	2/15/98
Manganese	55.00	10000	2/15/98
Nickel	60.00	500	2/15/98
Selenium	82.00	2000	2/15/98
Silver	107.00	200	2/15/98
Thallium	205.00	2000	2/15/98
Vanadium	51.00	500	2/15/98

Quanterra, Inc.

Metals Data Reporting Form

Linear Dynamic Ranges

Instrument: ICPST **Units:** ug/L

Element	Wavelength /Mass	Linear Range	Date of Linear Range
Aluminum	308.21	0	
Aluminum	308.21	1000000	3/15/99
Antimony	206.84	0	
Antimony	206.84	50000	3/15/99
Arsenic	189.04	20000	3/15/99
Arsenic	189.04	0	
Beryllium	313.04	0	
Beryllium	313.04	25000	3/15/99
Cadmium	226.50	0	
Cadmium	226.50	25000	3/15/99
Calcium	317.93	1000000	3/15/99
Calcium	317.93	0	
Cobalt	228.62	0	
Cobalt	228.62	50000	3/15/99
Lead	220.35	0	
Lead	220.35	100000	3/15/99
Magnesium	279.08	0	
Magnesium	279.08	1000000	3/15/99
Zinc	206.20	50000	3/15/99
Zinc	206.20	0	

Quanterra, Inc.

Metals Data Reporting Form

Preparation Log

Preparation Batch: 9102157 **Matrix:** Solid

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
CTH50B	4/13/99	0.6	50	
CTH50C	4/13/99	0.6	50	
CTH50L	4/13/99	0.6	50	
CTGKV	4/13/99	0.6	50	
CTGL0	4/13/99	0.6	50	
CTGL1	4/13/99	0.6	50	
CTGL2	4/13/99	0.6	50	
CTGL5	4/13/99	0.6	50	
CTGL6	4/13/99	0.6	50	

Quanterra, Inc.

Metals Data Reporting Form

Preparation Log

Preparation Batch: 9103164 **Matrix:** Solid

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
CTJ69B	4/13/99	1	100	
CTJ69C	4/13/99	1	100	
CTGKV	4/13/99	1	100	
CTGKX	4/13/99	1	100	
CTGL0	4/13/99	1	100	
CTGL1	4/13/99	1	100	
CTGL2	4/13/99	1	100	
CTGL3	4/13/99	1	100	
CTGL4	4/13/99	1	100	
CTGL5	4/13/99	1	100	
CTGL7	4/13/99	1	100	

Quanterra, Inc.

Metals Data Reporting Form

Preparation Log

Preparation Batch: 9103166 **Matrix:** Solid

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
CTJ6EB	4/13/99	1.00	100	
CTJ6EC	4/13/99	1.00	100	
CTGKV	4/13/99	1.00	100	
CTGKX	4/13/99	1.00	100	
CTGL0	4/13/99	1.00	100	
CTGL1	4/13/99	1.00	100	
CTGL2	4/13/99	1.00	100	
CTGL3	4/13/99	1.00	100	
CTGL4	4/13/99	1.00	100	
CTGL5	4/13/99	1.00	100	
CTGL6	4/13/99	1.00	100	
CTGL7	4/13/99	1.00	100	

Quanterra, Inc.

Metals Data Reporting Form

Preparation Log

Preparation Batch: 9105203 **Matrix:** Solid

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
CTM30B	4/15/99	0.6	50	
CTM30C	4/15/99	0.6	50	
CTM30L	4/15/99	0.6	50	
CTGKX	4/15/99	0.6	50	
CTGL3	4/15/99	0.6	50	
CTGL7	4/15/99	0.6	50	

Quanterra, Inc.

Metals Data Reporting Form

Preparation Log

Preparation Batch: 9116195 **Matrix:** Solid

Sample ID	Prep Date	Weight (g)	Volume (ml)	% Moisture
CV3CDB	4/27/99	0.6	50	0
CV3CDC	4/27/99	0.6	50	0
CV3CDL	4/27/99	0.6	50	0
CTGL4	4/27/99	0.0516	50	0

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0414s1.prn

Sample Name	Date of Analysis	Time of Analysis
Std1Rep1	4/14/99	8:28 AM
Std2Rep1	4/14/99	8:30 AM
Std3Rep1	4/14/99	8:32 AM
Std4Rep1	4/14/99	8:35 AM
Std5Rep1	4/14/99	8:38 AM
Std6Rep1	4/14/99	8:40 AM
Ck2	4/14/99	8:45 AM
Ck1	4/14/99	8:47 AM
NIST	4/14/99	8:50 AM
CTH4TB	4/14/99	8:53 AM
CTH4TC	4/14/99	8:55 AM
CTH4TL	4/14/99	8:58 AM
CTEM9	4/14/99	9:00 AM
CTEMD	4/14/99	9:03 AM
CTFLT	4/14/99	9:05 AM
CTFLTS MS	4/14/99	9:08 AM
CTFLTD SD	4/14/99	9:10 AM
CTFMG	4/14/99	9:13 AM
Ck4	4/14/99	9:15 AM
Ck1	4/14/99	9:18 AM
CTFMQ	4/14/99	9:20 AM
CTFMX	4/14/99	9:23 AM
CTFN0	4/14/99	9:25 AM
CTE48	4/14/99	9:27 AM
CTE4C	4/14/99	9:30 AM
CTE4F	4/14/99	9:32 AM
CTE4H	4/14/99	9:34 AM
CTE4HS MS	4/14/99	9:36 AM
CTE4HD SD	4/14/99	9:39 AM
CTE4K	4/14/99	9:42 AM
Ck4	4/14/99	9:44 AM
Ck1	4/14/99	9:47 AM
CTE4L	4/14/99	9:49 AM
CTH50B	4/14/99	9:52 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0414s1.prn

Sample Name	Date of Analysis	Time of Analysis
CTH50C	4/14/99	9:54 AM
CTH50L	4/14/99	9:57 AM
CTG4F	4/14/99	9:59 AM
CTG4FS MS	4/14/99	10:03 AM
CTG4FD SD	4/14/99	10:07 AM
CTGKV	4/14/99	10:10 AM
CTGKX	4/14/99	10:14 AM
CTGL0	4/14/99	10:18 AM
Ck4	4/14/99	10:21 AM
Ck1	4/14/99	10:24 AM
CTGL1	4/14/99	10:26 AM
CTGL2	4/14/99	10:29 AM
CTGL3	4/14/99	10:32 AM
CTGL4	4/14/99	10:36 AM
CTGL5	4/14/99	10:40 AM
CTGL6	4/14/99	10:43 AM
CTGL7	4/14/99	10:46 AM
CTFN3	4/14/99	10:49 AM
CTGNO	4/14/99	10:52 AM
CTGN1	4/14/99	10:54 AM
Ck4	4/14/99	10:56 AM
Ck1	4/14/99	10:59 AM
CTGN2	4/14/99	11:04 AM
CTGN3	4/14/99	11:06 AM
CTG4F 5	4/14/99	11:08 AM
CTG4FS MS	4/14/99	11:11 AM
CTG4FD SD	4/14/99	11:14 AM
Ck4	4/14/99	11:20 AM
Ck1	4/14/99	11:23 AM
CTG4F	4/14/99	11:25 AM
CTGKV 5	4/14/99	11:29 AM
CTGKX 20	4/14/99	11:32 AM
CTGL2 5	4/14/99	11:35 AM
CTGL3 10	4/14/99	11:38 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0414s1.prn

Sample Name	Date of Analysis	Time of Analysis
CTGL3 10	4/14/99	11:40 AM
Ck4	4/14/99	11:43 AM
Ck1	4/14/99	11:46 AM
CTGL3 10	4/14/99	11:48 AM
CTGL5 5	4/14/99	11:51 AM
CTGL6 5	4/14/99	11:54 AM
CTGL7 5	4/14/99	11:57 AM
Ck4	4/14/99	11:59 AM
Ck1	4/14/99	12:02 PM
CTG4F	4/14/99	12:10 PM
CTG4FS MS	4/14/99	12:15 PM
CTG4FD SD	4/14/99	12:17 PM
Ck4	4/14/99	12:20 PM
Ck1	4/14/99	12:23 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0416sd.prn

Sample Name	Date of Analysis	Time of Analysis
Std1Rep1	4/16/99	8:40 AM
Std2Rep1	4/16/99	8:43 AM
Std3Rep1	4/16/99	8:45 AM
Std4Rep1	4/16/99	8:47 AM
Std5Rep1	4/16/99	8:50 AM
Std6Rep1	4/16/99	8:53 AM
Ck2	4/16/99	8:56 AM
Ck1	4/16/99	8:59 AM
NIST	4/16/99	9:01 AM
CTM30B	4/16/99	9:04 AM
CTM30C	4/16/99	9:06 AM
CTM30L	4/16/99	9:09 AM
CTGKX 1X	4/16/99	9:12 AM
CTGKXS MS	4/16/99	9:17 AM
CTGKXD SD	4/16/99	9:22 AM
CTGKX 6X	4/16/99	9:28 AM
CTGKXS MS	4/16/99	9:32 AM
CTGKXD SD	4/16/99	9:36 AM
Ck4	4/16/99	9:40 AM
Ck1	4/16/99	9:43 AM
CTGKX 11X	4/16/99	9:45 AM
CTGKXS MS	4/16/99	9:48 AM
CTGKXD SD	4/16/99	9:51 AM
CTGL3 1X	4/16/99	9:54 AM
CTGL3 6X	4/16/99	9:58 AM
CTGL4 1X	4/16/99	10:01 AM
Ck4	4/16/99	10:11 AM
Ck1	4/16/99	10:14 AM
CTGL311X	4/16/99	10:16 AM
CTGL4 1X	4/16/99	10:19 AM
CTGL4 6X	4/16/99	10:23 AM
CTGL4 11X	4/16/99	10:27 AM
CTGL7 1X	4/16/99	10:29 AM
CTGL7 6X	4/16/99	10:33 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0416sd.prn

Sample Name	Date of Analysis	Time of Analysis
CTGL7 11X	4/16/99	10:35 AM
CTFN3	4/16/99	10:37 AM
CTGN0CTGN1	4/16/99	10:40 AM
CTGN1	4/16/99	10:42 AM
Ck4	4/16/99	10:44 AM
Ck1	4/16/99	10:47 AM
CTGN2	4/16/99	10:49 AM
CTGN3	4/16/99	10:51 AM
Ck4	4/16/99	10:53 AM
Ck1	4/16/99	10:56 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0428s.prn

Sample Name	Date of Analysis	Time of Analysis
Std1Rep1	4/28/99	7:28 AM
Std2Rep1	4/28/99	7:30 AM
Std3Rep1	4/28/99	7:32 AM
Std4Rep1	4/28/99	7:35 AM
Std5Rep1	4/28/99	7:38 AM
Std6Rep1	4/28/99	7:41 AM
Ck2	4/28/99	7:44 AM
Ck1	4/28/99	7:47 AM
NIST	4/28/99	7:49 AM
CV3CDB	4/28/99	7:52 AM
CV3CDC	4/28/99	7:54 AM
CV3CDL	4/28/99	7:57 AM
Ck4	4/28/99	8:05 AM
Ck1	4/28/99	8:08 AM
CTGL4 1X	4/28/99	8:10 AM
CTGL4 3X	4/28/99	8:15 AM
CTGL4 6X	4/28/99	8:19 AM
CTGL4 12X	4/28/99	8:23 AM
CV12N	4/28/99	8:26 AM
CV12W	4/28/99	8:29 AM
CV12X	4/28/99	8:31 AM
CV28V	4/28/99	8:33 AM
CV28VS MS	4/28/99	8:36 AM
CV28VD SD	4/28/99	8:39 AM
Ck4	4/28/99	8:42 AM
Ck1	4/28/99	8:45 AM
CV28W	4/28/99	8:47 AM
CV290	4/28/99	8:49 AM
CV293	4/28/99	8:51 AM
CV294	4/28/99	8:54 AM
CV3CFB	4/28/99	8:56 AM
CV3CFC	4/28/99	8:58 AM
Ck4	4/28/99	9:01 AM
Ck1	4/28/99	9:04 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0428s.prn

Sample Name	Date of Analysis	Time of Analysis
CV3CFC	4/28/99	9:06 AM
CV3CFL	4/28/99	9:09 AM
CV10V	4/28/99	9:12 AM
CV10VS MS	4/28/99	9:16 AM
CV10VD SD	4/28/99	9:19 AM
CV118	4/28/99	9:22 AM
CV11C	4/28/99	9:24 AM
CV11E	4/28/99	9:26 AM
CV11G	4/28/99	9:29 AM
CV11H	4/28/99	9:31 AM
Ck4	4/28/99	9:34 AM
Ck1	4/28/99	9:37 AM
CV11J	4/28/99	9:39 AM
CV11L	4/28/99	9:41 AM
CV11M	4/28/99	9:43 AM
CV11R	4/28/99	9:46 AM
CTX5AB	4/28/99	9:49 AM
CTX6AC	4/28/99	9:51 AM
Ck4	4/28/99	9:56 AM
Ck1	4/28/99	10:00 AM
CTX6AC	4/28/99	10:02 AM
CTX5AL	4/28/99	10:05 AM
CTVCQ	4/28/99	10:08 AM
CTVCV	4/28/99	10:10 AM
CTVD0	4/28/99	10:13 AM
CTVD1	4/28/99	10:15 AM
CTVD2	4/28/99	10:17 AM
CTVD4	4/28/99	10:20 AM
CTVD5	4/28/99	10:22 AM
CTVD5S MS	4/28/99	10:25 AM
Ck4	4/28/99	10:28 AM
Ck1	4/28/99	10:31 AM
NIST	4/28/99	10:33 AM
CTVD5D SD	4/28/99	10:37 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: CVAA

Chart Number: 0428s.prn

Sample Name	Date of Analysis	Time of Analysis
CTVD8	4/28/99	10:40 AM
CTVD9	4/28/99	10:42 AM
CTVDD	4/28/99	10:44 AM
Ck4	4/28/99	10:47 AM
Ck1	4/28/99	10:50 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICP

Chart Number: 990419d.arc

Sample Name	Date of Analysis	Time of Analysis
CAL BLK	4/19/99	8:38 AM
CAL STD	4/19/99	8:41 AM
CAL STD 2	4/19/99	8:45 AM
HIGH STANDARD	4/19/99	8:49 AM
HIGH STANDARD B	4/19/99	8:52 AM
ICV	4/19/99	8:56 AM
ICB	4/19/99	8:59 AM
CRI	4/19/99	9:03 AM
ICSA	4/19/99	9:07 AM
ICSAB	4/19/99	9:11 AM
CCV1	4/19/99	9:15 AM
CCB1	4/19/99	9:18 AM
CTKNH	4/19/99	9:22 AM
CTKNHP	4/19/99	9:26 AM
CTKNHS	4/19/99	9:30 AM
CTKNHD	4/19/99	9:33 AM
CTKNH 10X	4/19/99	9:43 AM
CCV2	4/19/99	9:48 AM
CCB2	4/19/99	9:51 AM
CTKGCB	4/19/99	9:55 AM
CTKGCC	4/19/99	9:59 AM
CTK29	4/19/99	10:02 AM
CTK29P	4/19/99	10:06 AM
CTK29S	4/19/99	10:10 AM
CTK29D	4/19/99	10:13 AM
CTK2F	4/19/99	10:17 AM
CTK2H	4/19/99	10:21 AM
CTK2K	4/19/99	10:24 AM
CTK2M	4/19/99	10:28 AM
CCV3	4/19/99	10:31 AM
CCB3	4/19/99	10:35 AM
CTJTR	4/19/99	10:39 AM
CTJV9	4/19/99	10:42 AM
CTJVC	4/19/99	10:46 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICP

Chart Number: 990419d.arc

Sample Name	Date of Analysis	Time of Analysis
CTJVH	4/19/99	10:50 AM
CTJVL	4/19/99	10:53 AM
CTJVP	4/19/99	10:57 AM
CTJVV	4/19/99	11:00 AM
CTJW0	4/19/99	11:04 AM
CTJW5	4/19/99	11:08 AM
CTJW9	4/19/99	11:11 AM
CCV4	4/19/99	11:15 AM
CCB4	4/19/99	11:19 AM
CTJWC	4/19/99	11:22 AM
CTJ69B	4/19/99	11:26 AM
CTJ69C	4/19/99	11:41 AM
CCV5	4/19/99	11:45 AM
CCB5	4/19/99	11:49 AM
CTH5FB	4/19/99	11:55 AM
CTH5FC	4/19/99	11:58 AM
CTH5FL	4/19/99	12:02 PM
CTGVE	4/19/99	12:05 PM
CTGVJ	4/19/99	12:09 PM
CTGVJP	4/19/99	12:13 PM
CTGVJS	4/19/99	12:16 PM
CTGVJD	4/19/99	12:20 PM
CTGVK	4/19/99	12:23 PM
CTGVL	4/19/99	12:27 PM
CCV6	4/19/99	12:31 PM
CCB6	4/19/99	12:34 PM
CTGVM	4/19/99	12:38 PM
CTGVN	4/19/99	12:42 PM
CTM2GB	4/19/99	12:45 PM
CTM2GC	4/19/99	12:49 PM
CTM2GL	4/19/99	12:52 PM
CTLCN	4/19/99	12:56 PM
CTLCNP	4/19/99	1:00 PM
CTLCNS	4/19/99	1:03 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICP

Chart Number: 990419d.arc

Sample Name	Date of Analysis	Time of Analysis
CTLCND	4/19/99	1:07 PM
CTLCR	4/19/99	1:10 PM
CCV7	4/19/99	1:14 PM
CCB7	4/19/99	1:18 PM
CTLCT	4/19/99	1:21 PM
CTL10	4/19/99	1:25 PM
CTL12	4/19/99	1:29 PM
CTL14	4/19/99	1:32 PM
CTL19	4/19/99	1:36 PM
CTL1D	4/19/99	1:41 PM
CTLAW	4/19/99	1:45 PM
CTLCW	4/19/99	1:49 PM
CCV8	4/19/99	1:53 PM
CCB8	4/19/99	1:56 PM
CTJ69B	4/19/99	2:09 PM
CTJ69C	4/19/99	2:13 PM
CTGKV	4/19/99	2:16 PM
CTGKX	4/19/99	2:20 PM
CTGKXP	4/19/99	2:23 PM
CTGKXS	4/19/99	2:27 PM
CTGKXD	4/19/99	2:30 PM
CTGL0	4/19/99	2:34 PM
CTGL1	4/19/99	2:38 PM
CCV9	4/19/99	2:41 PM
CCB9	4/19/99	2:45 PM
CTGL2	4/19/99	2:48 PM
CTGL3	4/19/99	2:52 PM
CTGL4	4/19/99	2:56 PM
CTGL5	4/19/99	2:59 PM
CTGL7	4/19/99	3:07 PM
CCV10	4/19/99	3:10 PM
CCB10	4/19/99	3:14 PM
CTNMVB	4/19/99	3:18 PM
CTNMVC	4/19/99	3:22 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICP

Chart Number: 990419d.arc

Sample Name	Date of Analysis	Time of Analysis

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPMS

Chart Number: 041599.rep

Sample Name	Date of Analysis	Time of Analysis
Blank	4/15/99	8:50 AM
Standard 1	4/15/99	8:55 AM
QC Std 1	4/15/99	9:00 AM
QC Std 2	4/15/99	9:04 AM
ICSA	4/15/99	9:10 AM
ICSA	4/15/99	9:16 AM
BLANK	4/15/99	9:21 AM
QC Std 3	4/15/99	9:26 AM
QC Std 5	4/15/99	9:31 AM
CTJ6EB	4/15/99	9:37 AM
CTJ6EC	4/15/99	9:41 AM
CTGKV	4/15/99	9:46 AM
CTGKX	4/15/99	9:50 AM
CTGKX L	4/15/99	9:55 AM
CTGKX PDS	4/15/99	9:59 AM
CTGKXS	4/15/99	10:04 AM
CTGKXD	4/15/99	10:08 AM
QC Std 3	4/15/99	10:15 AM
QC Std 4	4/15/99	10:21 AM
CTGL0	4/15/99	10:26 AM
CTGL1	4/15/99	10:31 AM
CTGL2	4/15/99	10:36 AM
CTGL3	4/15/99	10:40 AM
CTGL4	4/15/99	10:45 AM
CTGL5	4/15/99	10:49 AM
CTGL6	4/15/99	10:54 AM
CTGL7	4/15/99	10:58 AM
QC Std 3	4/15/99	11:04 AM
QC Std 4	4/15/99	11:08 AM
CTGKV	4/15/99	11:13 AM
CTGL4	4/15/99	11:18 AM
CTGL5	4/15/99	11:22 AM
CTGL7	4/15/99	11:27 AM
QC Std 3	4/15/99	11:31 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPMS

Chart Number: 041599.rep

Sample Name	Date of Analysis	Time of Analysis
QC Std 4	4/15/99	11:36 AM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: 0416w.arc

Sample Name	Date of Analysis	Time of Analysis
STD1-Blank	4/16/99	10:48 AM
HISTD	4/16/99	10:53 AM
HISTD	4/16/99	10:58 AM
ICV	4/16/99	11:03 AM
ICB	4/16/99	11:08 AM
CRI	4/16/99	11:13 AM
ICSA	4/16/99	11:18 AM
ICSAB	4/16/99	11:23 AM
CCV1	4/16/99	11:28 AM
CCB1	4/16/99	11:32 AM
CTH5FBF	4/16/99	12:09 PM
CTH5FCF	4/16/99	12:14 PM
CTH5FLF	4/16/99	12:20 PM
CTGVEF	4/16/99	12:25 PM
CTGVJF	4/16/99	12:31 PM
CTGVJPF	4/16/99	12:36 PM
CTGVJSF	4/16/99	12:41 PM
CTGVJDF	4/16/99	12:47 PM
CTGVKF	4/16/99	12:52 PM
CTGVLF	4/16/99	12:58 PM
CCV2	4/16/99	1:03 PM
CCB2	4/16/99	1:08 PM
CTGVMF	4/16/99	1:14 PM
CTGVNF	4/16/99	1:19 PM
CCV3	4/16/99	1:25 PM
CCB3	4/16/99	1:30 PM
CTJ69B	4/16/99	2:12 PM
CTJ69C	4/16/99	2:18 PM
CTGKV	4/16/99	2:23 PM
CTGKX	4/16/99	2:29 PM
CTGKXP	4/16/99	2:34 PM
CTGKXS	4/16/99	2:39 PM
CTGKXD	4/16/99	2:45 PM
CTGL0	4/16/99	2:50 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: 0416w.arc

Sample Name	Date of Analysis	Time of Analysis
CTGL1	4/16/99	2:56 PM
CTGL2	4/16/99	3:01 PM
CCV4	4/16/99	3:06 PM
CCB4	4/16/99	3:19 PM
CTGL3	4/16/99	3:25 PM
CTGL4	4/16/99	3:31 PM
CTGL5	4/16/99	3:37 PM
CTGL6	4/16/99	3:43 PM
CTGL7	4/16/99	3:49 PM
CCV5	4/16/99	3:55 PM
CCB5	4/16/99	4:01 PM
CT9MMB	4/16/99	4:07 PM
CT9MMC	4/16/99	4:13 PM
CT69P	4/16/99	4:19 PM
CT6CG	4/16/99	4:25 PM
CT6CGP	4/16/99	4:31 PM
CT6CGS	4/16/99	4:37 PM
CT6CGD	4/16/99	4:43 PM
CT6CW	4/16/99	4:49 PM
CT6D5	4/16/99	4:55 PM
CT6DE	4/16/99	5:01 PM
CCV6	4/16/99	5:06 PM
CCB6	4/16/99	5:12 PM
CT6DQ	4/16/99	5:18 PM
CT8LP	4/16/99	5:24 PM
CT8LW	4/16/99	5:30 PM
CT8LX	4/16/99	5:36 PM
CT8M0	4/16/99	5:42 PM
CCV7	4/16/99	5:48 PM
CCB7	4/16/99	5:54 PM
ICSA	4/16/99	6:00 PM
ICSAB	4/16/99	6:06 PM
CCV8	4/16/99	6:12 PM
CCB8	4/16/99	6:18 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: 0420w.arc

Sample Name	Date of Analysis	Time of Analysis
STD1-Blank	4/20/99	8:55 AM
HISTD	4/20/99	9:00 AM
HISTD	4/20/99	9:05 AM
ICV	4/20/99	9:10 AM
ICB	4/20/99	9:15 AM
ICB	4/20/99	9:23 AM
CRI	4/20/99	9:28 AM
ICSA	4/20/99	9:33 AM
ICSAB	4/20/99	9:38 AM
CCV1	4/20/99	9:43 AM
CCB1	4/20/99	9:52 AM
CCB1	4/20/99	9:57 AM
CTNP0B	4/20/99	10:06 AM
CTGKX	4/20/99	10:10 AM
CTGKXX	4/20/99	10:15 AM
CTGKXP	4/20/99	10:19 AM
CTGKXS	4/20/99	10:23 AM
CTGKXD	4/20/99	10:28 AM
CTGL4	4/20/99	10:32 AM
CCV2	4/20/99	10:36 AM
CCB2	4/20/99	10:40 AM
CTH5AB	4/20/99	11:02 AM
CTH5AC	4/20/99	11:07 AM
CTH5AL	4/20/99	11:11 AM
CTGVE	4/20/99	11:16 AM
CTGVJ	4/20/99	11:20 AM
CTGVJP	4/20/99	11:25 AM
CTGVJS	4/20/99	11:29 AM
CTGVJD	4/20/99	11:33 AM
CTGVK	4/20/99	11:38 AM
CTGVL	4/20/99	11:43 AM
CCV3	4/20/99	11:47 AM
CCB3	4/20/99	11:52 AM
CTGVM	4/20/99	12:04 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: 0420w.arc

Sample Name	Date of Analysis	Time of Analysis
CTGVN	4/20/99	12:09 PM
CCV4	4/20/99	12:14 PM
CCB4	4/20/99	12:19 PM
CCB4	4/20/99	12:27 PM
CTLXJB	4/20/99	12:35 PM
CTLXJC	4/20/99	12:39 PM
CTLXJL	4/20/99	12:43 PM
CTJTR	4/20/99	12:48 PM
CTJTRP	4/20/99	12:52 PM
CTJTRS	4/20/99	12:57 PM
CTJTRD	4/20/99	1:01 PM
CTJVC	4/20/99	1:05 PM
CTJVH	4/20/99	1:10 PM
CTJVL	4/20/99	1:14 PM
CCV5	4/20/99	1:19 PM
CCB5	4/20/99	1:23 PM
CCB5	4/20/99	1:28 PM
CTJVP	4/20/99	1:31 PM
CTJVV	4/20/99	1:35 PM
CTJW0	4/20/99	1:40 PM
CTJW5	4/20/99	1:44 PM
CTJW9	4/20/99	1:48 PM
CTJWC	4/20/99	1:53 PM
CTLEW	4/20/99	1:57 PM
CTLF0	4/20/99	2:02 PM
CTLF2	4/20/99	2:06 PM
CTLF3	4/20/99	2:10 PM
CCV6	4/20/99	2:15 PM
CCB6	4/20/99	2:19 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: 0422w1.arc

Sample Name	Date of Analysis	Time of Analysis
STD1-Blank	4/22/99	8:56 AM
HISTD	4/22/99	9:00 AM
HS	4/22/99	9:04 AM
ICV	4/22/99	9:09 AM
ICB	4/22/99	9:13 AM
CRI	4/22/99	9:17 AM
ICSA	4/22/99	9:22 AM
ICSAB	4/22/99	9:26 AM
CCV1	4/22/99	9:31 AM
CCB1	4/22/99	9:35 AM
CTJVP	4/22/99	9:39 AM
CTJVV	4/22/99	9:44 AM
CTJQ0	4/22/99	9:48 AM
CTJW5	4/22/99	9:52 AM
CTJW9	4/22/99	9:56 AM
CTJWC	4/22/99	10:01 AM
CTLEW	4/22/99	10:05 AM
CTLF0	4/22/99	10:09 AM
CTLF2	4/22/99	10:14 AM
CTLF3	4/22/99	10:18 AM
CCV2	4/22/99	10:23 AM
CCB2	4/22/99	10:27 AM
CTLF8	4/22/99	10:35 AM
CTLFA	4/22/99	10:39 AM
CCV3	4/22/99	10:43 AM
CCB3	4/22/99	11:01 AM
CTNVTB	4/22/99	11:09 AM
CTNVTC	4/22/99	11:14 AM
CTJV9	4/22/99	11:18 AM
CTJLT	4/22/99	11:22 AM
CTJM0	4/22/99	11:27 AM
CTJM2	4/22/99	11:31 AM
CTJM4	4/22/99	11:56 AM
CTM42	4/22/99	12:00 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: 0422w1.arc

Sample Name	Date of Analysis	Time of Analysis
CTM42P	4/22/99	12:05 PM
CTM42S	4/22/99	12:09 PM
CCV4	4/22/99	12:13 PM
CCB4	4/22/99	12:21 PM
CTM42D	4/22/99	12:25 PM
CTM43	4/22/99	12:29 PM
CTM44	4/22/99	12:34 PM
CTM45	4/22/99	12:38 PM
CTM46	4/22/99	12:42 PM
CTM48	4/22/99	12:47 PM
CTM4C	4/22/99	12:51 PM
CTM4E	4/22/99	12:56 PM
CTM4F	4/22/99	1:00 PM
CTM4H	4/22/99	1:05 PM
CCV5	4/22/99	1:09 PM
CCB5	4/22/99	1:15 PM
CCB5	4/22/99	1:19 PM
CTM4L	4/22/99	1:24 PM
CTM4N	4/22/99	1:28 PM
CTN9F	4/22/99	1:33 PM
CTWR7B	4/22/99	1:41 PM
CTWR7C	4/22/99	1:45 PM
CTV66	4/22/99	1:49 PM
CTV66P	4/22/99	1:53 PM
CTV66S	4/22/99	1:57 PM
CTV66D	4/22/99	2:01 PM
CTV67	4/22/99	2:05 PM
CCV6	4/22/99	2:09 PM
CCB6	4/22/99	2:13 PM
CCB6	4/22/99	2:19 PM
CRV69	4/22/99	2:23 PM
CTV6A	4/22/99	2:27 PM
CTV6E	4/22/99	2:31 PM
CTV6G	4/22/99	2:35 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: 0422w1.arc

Sample Name	Date of Analysis	Time of Analysis
CTV6J	4/22/99	2:39 PM
CTV6V	4/22/99	2:43 PM
ICSA	4/22/99	2:47 PM
ICSAB	4/22/99	2:51 PM
CCV7	4/22/99	2:58 PM
CCB7	4/22/99	3:07 PM
CTGL4	4/22/99	3:16 PM
CTM1VB	4/22/99	3:25 PM
CTM1VC	4/22/99	3:31 PM
CTM1VL	4/22/99	3:37 PM
CTJE7F	4/22/99	3:43 PM
CTJEFF	4/22/99	3:49 PM
CTJEJF	4/22/99	3:55 PM
CTJEKF	4/22/99	4:02 PM
CCV8	4/22/99	4:08 PM
CCB8	4/22/99	4:14 PM
CTLEWF	4/22/99	4:20 PM
CTLEWPF	4/22/99	4:26 PM
CTLEWSF	4/22/99	4:32 PM
CTLEWDF	4/22/99	4:38 PM
CTLFOF	4/22/99	4:45 PM
CTLF2F	4/22/99	4:51 PM
CTLF3F	4/22/99	4:57 PM
CTLF8F	4/22/99	5:03 PM
CTLFAF	4/22/99	5:09 PM
CTLG0F	4/22/99	5:15 PM
CCV9	4/22/99	5:21 PM
CCB9	4/22/99	5:28 PM
CTJ64B	4/22/99	5:34 PM
CTJ64C	4/22/99	5:40 PM
CTE48	4/22/99	5:46 PM
CTE4C	4/22/99	5:52 PM
CTE4F	4/22/99	5:58 PM
CTE4H	4/22/99	6:04 PM

Quanterra, Inc.

Metals Data Reporting Form

Instrument Runlog

Instrument: ICPST

Chart Number: 0422w1.arc

Sample Name	Date of Analysis	Time of Analysis
CTE4HP	4/22/99	6:11 PM
CTE4HS	4/22/99	6:17 PM
CTE4HD	4/22/99	6:23 PM
CTE4K	4/22/99	6:29 PM
CCV8	4/22/99	6:35 PM
CCB8	4/22/99	6:41 PM
CTE4L	4/22/99	6:48 PM
CTGN0	4/22/99	6:54 PM
CTGN1	4/22/99	7:00 PM
CTGN2	4/22/99	7:06 PM
CTGN3	4/22/99	7:12 PM
CCV9	4/22/99	7:18 PM
CCB9	4/22/99	7:24 PM
ICSA	4/22/99	7:31 PM
ICSAB	4/22/99	7:37 PM
CCV10	4/22/99	7:43 PM
CCB10	4/22/99	7:49 PM
CCB10	4/22/99	7:55 PM

CHAIN OF CUSTODY RECORD

ID100118

LEGS Laboratory for Environmental and Geological Studies

University of Colorado, Boulder CO 80501-0250

Quote # 29429

PROJECT NAME North Denver

PROJECT NO. EPA 00098

Field Log Book Reference No. _____

	SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	ANALYSIS	REMARKS
1	NO-98-253	4/1/99	8:26	North	TAL Metals	WESTON Samples
2	NO-98-782					
3	NO-98-292			Denver		
4	NO-98-640					
5	NO-98-627 <250			I-70 + Vasquez		
6	NO-98-549			Site		
7	NO-98-1302					
8	NO-98-1273					
9	NO-98-336					
10	NO-98-245					

SAMPLED BY (SIGN) NA

RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)	RELINQUISHED BY (SIGN)
DATE/TIME 4/2/99	DATE/TIME 4/2/99	DATE/TIME 4/7/99 1306	DATE/TIME

METHOD OF SHIPMENT	SHIPPED BY (SIGN)	RECEIVED FOR LABORATORY BY (SIGN)	DATE/TIME
Hand	—	Tommy Smith	4-7-99 1307

Quanterra - Denver

Sample Receiving Checklist

Lot #: 9D100118 Date/Time Received: 040999 1302

Company Name & Sampling Site: LEGS

*Cooler #(s): 1

Temperatures: 12.1

Unpacking & Labeling Check Points:

N/A	Yes	No		Initials
	☑	☐	1. Cooler seals intact.	PK
	☑	☐	2. Chain of custody present.	
	☐	☑	3. Bottles broken and/or are leaking, comment if yes.	
			PHOTOGRAPH BROKEN BOTTLES	
	☑	☐	4. Containers labeled, comment if no.	
	☑	☐	5. pH of all samples checked and meet requirements, note exceptions.	
	☑	☐	6. Chain of custody includes "received by" and "relinquished" by signatures, dates, and times.	
	☑	☐	7. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.	
	☑	☐	8. Chain of custody agrees with bottle count, comment if no.	
	☑	☐	9. Chain of custody agrees with labels, comment if no.	
☑	☐	☐	10. VOA samples filled completely, comment if no.	
☑	☐	☐	11. VOA bottles preserved, check for labels.	
	☐	☑	12. Did samples require preservation with sodium thiosulfate?	
☐	☐	☑	13. If yes to #12, did the samples contain residual chlorine?	
☐	☐	☑	14. Sediment present in "D," dissolved, bottles.	
	☐	☑	15. Are analyses with short holding times requested?	
☐	☐	☑	16. Is extra sample volume provided for MS, MSD or matrix duplicates?	
	☐	☑	17. Multiphase samples present? If yes, comment below.	
	☐	☑	18. Any subsampling for volatiles? If yes. list samples.	
			PHOTOGRAPH MULTIPHASE SAMPLES	
☑	☐	☐	19. Clear picture taken, labeled, and stapled to project folder.	
☑	☐	☐	20. Subcontract COC signed and sent with samples to bottle prep?	
	☐	☑	21. Was sample labeling double checked by a second person?	✓

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR)

Quanterra

Clouseau

Nonconformance Memo

NCM #:	D00144	Classification:	Deficiency
NCM Initiated By:	Bill Logan	Status:	PMREVIEW
Date Opened:	04/21/99	Production Area:	Metals
Date Closed:	N/A01/80	Tests:	None
		Lot #'s (Sample #'s):	D9D100118 (1,10,2,3,4,5,6,7,8,9)
		QC Batch:	9103164
Nonconformance:	QC data out of control		
Subcategory:	Other (explanation required)		

Problem Description / Root Cause

Name	Date	Description
Bill Logan	04/21/99	No dup was done with this batch. LCS was out for Fe and Be and at half normal strenth. There is not enough sample to reprep. MS/SD is in control for Be but will get MSB flag for Fe.

Corrective Action

Name	Date	Corrective Action
Bill Logan	04/21/99	Report as is per PM.
Richard Clinkscale	04/21/99	None. PM contacted by Group Leader and PM directed to report data.

Client Notification Summary

Client	Project Manager	Date Notified	Response Date	How Notified
WESTON, ROY F.	Ellen LaRiviere	04/21/99	04/27/99	by telephone

Response	Response Details
Process "as-is"	OK to report data

Approval History

Name	Date Approved:	Position
Bill Logan	04/21/99	Chemist
Richard Clinkscale	04/21/99	Group Leader
Ellen LaRiviere	04/27/99	Project Manager