

UTAH STATE DEPARTMENT OF HEALTH
DIVISION OF LABORATORY SERVICES
Environmental Chemistry Analysis Report

UDEQ - DSHW
ATTN:
PO BOX 144880
SALT LAKE CITY

UT 84114-4880

801-536-0200

Lab Number: 201301622 Sample Type: 50 Cost Code: 365
Description: SG-003
Collector: PAT SHEEHAN

Site ID: UDSHW	Source No: 00	Organic Review:	
Sample Date: 04/17/2013	Time: 12:33	Inorganic Review:	04/25/2013
		Radiochemistry Review:	
		Microbiology Review:	

TEST RESULTS:

Arsenic HW	<0.04 mg/l	Barium HW	7.01 mg/l
Cadmium HW	<0.005 mg/l	ChromiumHW	<0.005 mg/l
Lead HW	259 mg/l	Mercury HW	<0.0002 mg/l
SeleniumHW	<0.04 mg/l	Silver HW	<0.01 mg/l

QUALIFYING COMMENTS (*) on test results: NO COMMENTS

Trace levels up to 0.2 ppb metals may be present in bottles

END OF REPORT

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ATTN:
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Lab Number: 201301623 Sample Type: 50 Cost Code: 365
Description: SG-004
Collector: PAT SHEEHAN

Site ID: UDSHW	Source No: 00	Organic Review:	
Sample Date: 04/17/2013	Time: 12:33	Inorganic Review:	04/25/2013
		Radiochemistry Review:	
		Microbiology Review:	

TEST RESULTS:

Arsenic HW	<0.04 mg/l	Barium HW	3.89 mg/l
Cadmium HW	<0.005 mg/l	ChromiumHW	<0.005 mg/l
Lead HW	95 mg/l	Mercury HW	<0.0002 mg/l
SeleniumHW	<0.04 mg/l	Silver HW	<0.01 mg/l

QUALIFYING COMMENTS (*) on test results: NO COMMENTS

Trace levels up to 0.2 ppb metals may be present in bottles

END OF REPORT

Case Narrative

Instrument Analysis Method: EPA 6010
Sample Extraction Method: EPA 1311 (TCLP)
Sample Digestion Method: EPA 3010

Client: DSHW
Matrix: GLASS SOLID

Sample #: 201301620-1623
Analysis Date: 04/19/2013
Digestion and Analysis performed by: David S. and Robert L.

Analysis/Method: EPA method 6010 was used for the analysis of these samples for metals Analysis using Inductive Coupling Plasma with optical emission spectrometry (ICP-OES).

General Set Information: Utah Public Health Laboratory received these samples for metals analysis. The samples were analyzed within holding times.

Sample Extraction: Sample was extracted following SOP Method 1311.

Sample Digestion: 50 ml of sample extract was digested with acids for a final volume of 50 ml, following SOP Method 3010.

Initial Calibration and Calibration Verification: The ICP was calibrated using six to eight calibration points with lowest standard at or below the Method Reporting level (MRL). The calibration curve was verified using a second source reference material (SRM). The SRM result was within +/- 10% of the SRM target value. The calibration correlation coefficient was >0.995. The Method reporting level was verified by analyzing a check standard at the MRL concentration of respective metals.

Method Blank Analysis: An instrument blank sample was prepared by using DI water. The blank result was below the method-reporting limit (MRL). A Reagent blank (LRB) was prepared with DI water and digested with samples. LRB (Blank) results were below MRL.

LFM/LFMD Analysis: Matrix spike and matrix spike duplicate samples were performed for sample 201301623.

Confirmation for lead (Pb) was performed by spiking the digestion liquid with Pb std. solution (see Table 3)

Laboratory Fortified Blank Analysis: A Laboratory Fortified Blank (LFB) sample was analyzed with these samples.

Instrument Analysis Method: EPA 6010
Sample Extraction Method: EPA 1311 (TCLP)
Sample Digestion Method: EPA 3010

Client: DSHW
Matrix: GLASS SOLID

Sample #: 201301620-1623
Analysis Date: 04/19/2013
Digestion and Analysis performed by: David S. and Robert L.

Table 1. Sample Results

Sample #	Ag ppm	As ppm	Ba ppm	Cd ppm	Cr ppm	Pb ppm	Se ppm
201301620	<0.01	<0.04	1.65	<0.005	<0.005	27	<0.04
201301621	<0.01	<0.04	11.9	<0.005	<0.005	444	<0.04
201301622	<0.01	<0.04	7.01	<0.005	<0.005	259	<0.04
201301623	<0.01	<0.04	3.89	<0.005	<0.005	95	<0.04

Table 2. Quality Control Summary (Spiked value: 1 ppm)

QC- Type	Ag % R	As % R	Ba % R	Cd % R	Cr % R	Pb % R	Se % R	% Ranges Accepted
Blank (LRB)	<MRL	<MRL	<MRL	<MRL	<MRL	<MRL	<MRL	
SRM	108.2	100.6	108.6	102.9	101.8	104.1	102.3	90-110
LFB	107.3	99.9	103.7	101.1	103.3	101.6	97.8	80-120
LFB-Dup	106.6	100.3	103.2	100.1	102.3	101.2	100.1	80-120
LFM	101.4	110.1	111.4	101.6	101.4	See Table3	117.4	75-125
LFM-Dup	101.1	112.0	116.6	102.3	101.7	See Table3	118.8	75-125

Table 3. Lead (Pb) confirmation by Post Digestion matrix spike summary (Spiked value: 1 ppm)

QC- Type	Pb % R	% Ranges Accepted
201301620 spike	106.0	80-120
201301620 spike dup	107.0	80-120
201301621 spike	91.0	80-120
201301621 spike dup	103.0	80-120
201301622 spike	94.0	80-120
201301622 spike dup	103.0	80-120
201301623 spike	112.0	80-120
201301623 spike dup	112.0	80-120

