Region 1, New England

United States Environmental Protection Agency
Office of Environmental Measurement & Evaluation
11 Technology Drive
North Chelmsford, MA 01863-2431

Laboratory Report

December 06, 2013

Mia Pasquerella - Mail Code OSRR02-2
US EPA New England R1

Project Number: 13110054
Project: Turkey Brook - Litchfield, CT
Analysis: Metals by XRF
EPA Chemist: Janet Paquin
JP 12/6/13

Date Samples Received by the Laboratory: 11/25/2013

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-INGXRF0.

Samples were screened using a PANaniltical Epsilon 5 energy dispersive x-ray fluorescence (XRF) spectrometer. The spectrometer is a high resolution energy dispersive x-ray fluorescence spectrometer. It uses both direct and secondary targets to qualitatively and quantitatively analyze elements.

Data were reviewed in accordance with the internal verification procedures described in the EPA New England Quality Manual for NERL.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

If you have any questions please call me at 617-918-8340 .

Sincerely,

Digitally signed by Dan Boudreau
DN: cn=Dan Boudreau, o=EPA, ou=EIA, email=boudreau.dan@epa.gov, c=US
Date: 2013.12.10 13:28:46 -05'00'

13110054$XRF

Qualifiers:

RL	Reporting limit
ND	Not Detected above reporting limit
NA	Not Applicable
NC	Not calculated since analyte concentration is ND
J1	Estimated value due to MS recovery outside accceptance criteria
J2	Estimated value due to LFB result outside acceptance criteria
J3	Estimated value due to RPD result outside acceptance criteria
J4	Estimated value due to standard reference material result outside acceptance criteria
B	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

Sample results are in mg/Kg as received.

Turkey Brook - Litchfield, CT

Metals by XRF

Client Sample ID:	13090009-0001	Lab Sample ID:	AB45642
Date of Collection:	11/22/2013	Matrix:	PRODUCT
Date of Preparation:	12/06/2013	Amount Prepared:	
Date of Analysis:	12/06/2013	Percent Solids:	
Dry Weight Prepared:		Extract Dilution:	
Wet Weight Prepared:		pH:	

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
7440-22-4	Silver	ND	10	
7440-38-2	Arsenic	ND	10	J4
7440-39-3	Barium	ND	50	
7440-43-9	Cadmium	ND	10	
7440-47-3	Chromium	ND	40	
7439-97-6	Mercury	ND	20	
7439-92-1	Lead	**52**	5.0	
7782-49-2	Selenium	ND	10	

Comments:

Turkey Brook - Litchfield, CT

Laboratory Duplicate Results

Sample ID: AB45642

PARAMETER	SAMPLE RESULT mg/Kg	SAMPLE DUPLICATE RESULT mg/Kg	PRECISION RPD %	QC LIMITS
Arsenic	ND	ND	NC	35
Barium	ND	ND	NC	35
Cadmium	ND	ND	NC	35
Chromium	ND	ND	NC	35
Lead	52	54	4	35
Mercury	ND	ND	NC	35
Selenium	ND	ND	NC	35
Silver	ND	ND	NC	35

Samples in Batch: AB45642

Quality Control Check Sample Results for Liquids

Conostan S-21 Oil Standard (12/06/13 #1)

Parameter	Found*	Certified Value*	% Recovery
Ag	75	100	75
Ba	100	100	100
Cd	71	100	71
Cr	120	100	120
Pb	78	100	78

Conostan S-21 Oil Standard (12/06/13 #2)

Parameter	Found*	Certified Value*	% Recovery
Ag	74	100	74
Ba	99	100	99
Cd	71	100	71
Cr	120	100	120
Pb	78	100	78

*Results are in mg/Kg

Quality Control Check Sample Results for Liquids (cont.)

Conostan 100 ppm As Oil Standard (12/06/13)

Parameter	Found*	Certified Value*	% Recovery
As	48	100	48**

Conostan 100 ppm Hg Oil Standard (12/06/13)

Parameter	Found*	Certified Value*	% Recovery
Hg	100	100	100

Conostan 100 ppm Se Oil Standard (12/06/132)

Parameter	Found*	Certified Value*	% Recovery
Se	80	100	80

*Results are in mg/Kg

** This result is outside the acceptance range of 70 - 130 percent.

13110054

CHAIN OF CUSTODY RECORD

Turkey Brook

Contact Name: Mia Pasquerella

Contact Phone: 6179181120

No: 11/22/13-0001

Cooler #:

Lab: US EPA NERL

Lab Phone:

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
	13090009-0001	MW-6	Oil ID, VOA, Metals, PCB	Product	11/22/2013	09:30	3	40 ml VOA	None	

Special Instructions: Please forward results to OSC Pasquerella and OSC Bazenas

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Delivery	Eric D. Cor	11/25/13	[illegible]	[illegible]	0710						
			D Edwood	11/25/13	8:00						

13110054$VOAHS
13110054$XRF
13110054OILID

13110054$PCBP