US EPA

PROJECT: RADFORD
SEP-OCT 2016

CLIENT # U012
REPORT # 16-746

SUBMITTED BY:
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Case Narrative

Date: November 2, 2016

General Information

Client:	US EPA
Client Number:	U012
Report Number:	16-746
Sample Description:	37mm impregnated cellulose filters
Sample Numbers:	16-C758 – 16-C768

Analysis

Analytes:	Hexavalent Chromium
Analytical Protocols:	Modified CARB SOP MLD039
Analytical Notes:	No problems were encountered during the analyses. All samples were analyzed within the 90 day holding time.
QA/QC Review:	All of the data have been reviewed by the analysts performing the analyses and the project manager. All of the quality control and sample-specific information in this package is complete and meets or exceeds the minimum requirements for acceptability.
Comments:	If you have any questions or concerns regarding this analysis, please feel free to contact the project manager.
Disclaimer:	This report shall not be reproduced, except in full, without the written approval of the laboratory. The results only represent that of the samples as received into the laboratory.

Paul Duda 11/2/16

Project Manager Date
Paul Duda

Client: U012 - US EPA
Report Number: 16-746

Lab ID: 16-C758
Client ID: PS-MK90-CrVI-092916-01
Site: Radford
Sample Date: 9/29/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	19.68	0.750

Lab ID: 16-C759
Client ID: PS-MK90-CrVI-092916-02
Site: Radford
Sample Date: 9/29/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	12.60	0.750

Lab ID: 16-C760
Client ID: PS-SW-CrVI-093016-01
Site: Radford
Sample Date: 9/30/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	< MDL	0.750

Lab ID: 16-C761
Client ID: PS-SW-CrVI-093016-02
Site: Radford
Sample Date: 9/30/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	< MDL	0.750

Lab ID: 16-C762
Client ID: PS-MK90-CrVI-100316-01
Site: Radford
Sample Date: 10/ 3/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	9.585	0.750

Client: U012 - US EPA
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Lab ID: 16-C763
Client ID: PS-MK90-CrVI-100316-02
Site: Radford
Sample Date: 10/ 3/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	16.28	0.750

Lab ID: 16-C764
Client ID: PS-MK90-CrVI-100316-03
Site: Radford
Sample Date: 10/ 3/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	7.125	0.750

Lab ID: 16-C765
Client ID: PS-SW-CrVI-100616
Site: Radford
Sample Date: 10/ 6/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	0.855	0.750

Lab ID: 16-C766
Client ID: BS-CrVI-100616
Site: Radford
Sample Date: 10/ 6/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	< MDL	0.750

Lab ID: 16-C767
Client ID: TS-CrVI-101116-01
Site: Radford
Sample Date: 10/11/16
Deposit Area: 8.04 cm²

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	< MDL	0.750

Client: U012 - US EPA
Report Number: 16-746

Lab ID: 16-C768
Client ID: BF-CrVI-101116-02
Site: Radford
Sample Date: 10/11/16
Deposit Area: 8.04 cm^2

Analyte	ng/filter Conc.	MDL
IC		
Cr VI	< MDL	0.750

QA/QC Report

Client Name: US EPA
Project Number: U012
Analytical Technique: IC-PCR
Sample Description: 37mm Impregnated Cellulose
Report Number: 16-746

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Blank Data

Analyte	Sample ID	Measured Conc. µg/L	MDL Conc. µg/L
Cr VI	ICB	< MDL	0.050
Cr VI	Prep_Blk	< MDL	0.050
Cr VI	*Meth_Blk* *	*< MDL*	*0.750*
Cr VI	CCB	< MDL	0.050
Cr VI	CCB	< MDL	0.050

*: Method Blank concentration in µg/filter

Calibration QC

Analyte	Sample ID	Standard Conc. µg/L	Measured Conc. µg/L	Percent Recovery
Cr VI	ICV	1.00	1.00	99.7
Cr VI	CCV	1.00	1.02	101.8
Cr VI	CCV	1.00	1.01	100.9

Replicate Data

Analyte	Sample ID	Sample Conc. µg/L	Replicate Conc. µg/L	RPD
Cr VI	16-C758	1.31	1.26	4.44

RPD = {(sample-replicate)/[(sample+replicate)/2]}x100
N/C: RPD is not calculated when sample or replicate is below detection limit
#: per EPA CLP protocol, control limits do not apply if sample and/or replicate concentration is less than 5x the detection limit

Laboratory Control Sample/Matrix Post Spike Analysis

Analyte	Sample ID	Sample Conc. µg/L	Spike Conc. µg/L	Spike Amount µg/L	Percent Recovery
Cr VI	LCS	< 0.05	1.00	1.00	100.
Cr VI	LCS	< 0.05	1.01	1.00	101.
Cr VI	16-C759	0.840	2.79	2.00	97.6

*: per EPA CLP protocol, control limits do not apply if spike concentration is less than 25% of the sample concentration

LCS Duplicate Data

Analyte	Sample ID	Original Conc. µg/L	Replicate Conc. µg/L	RPD
Cr VI	LCS Dup	1.00	1.01	0.20

RPD = {(sample-replicate)/[(sample+replicate)/2]}x100

QA/QC Limits
Continuing Calibration: ± 10% *LCS: ± 20%*
Replicates: ± 20% RPD *Post Spikes: ± 25%*

Project: Radford
Sep-Oct 2016

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Cr VI

16-746

SAMPLER:

Requested Analyses

	SAMPLE ID	DATE	TIME	MATRIX	~~PM~~	Filter #	1	2	3	4	5	6	7	8	9	10	Remarks
1	PS-MK90-CrVI-092916-01	092916		MK-90 Burn 1-2		1	X										16-C758
2	PS-MK90-CrVI-092916-02	092916		MK-90 Burn 3		2	X										16-C759
3	PS-SW-CrVI-093016-01	093016		SW Burn 1		3	X										16-C760
4	PS-SW-CrVI-093016-02	093016		SW Burn 2		4	X										16-C761
5	PS-MK90-CrVI-100316-01	100316		MK90 Burn#1		5	X										16-C762
6	PS-MK90-CrVI-100316-02	100316		MK90 Burn#2		6	X										16-C763
7	PS-MK90-CrVI-100316-03	100316		MK90 Burn#3		7	X										16-C764
8	PS-SW-CrVI-100616	100616		SW Burn#2		8	X										16-C765
9	BS-CrVI-100616	100616		Ambient		9	X										16-C766
10 11	TS-CrVI-101116-01 BFS-CrVI 101116 02	101116		Trip blank blank filter		10, 11	X										16-C767 16-C768

Requested Analyses	
1	Cr VI
2	
3	
4	
5	
6	
7	

Special Instructions/Comments:

#11 is a blank filter

☐ Special QA/QC Instructions

Laboratory Information and Receipt

Lab Name: CWI

Shipping Tracking #

Specify Turnaround Requirements:

☐ Cooler packed with ice

☐ Cooler custody seal intact

Sample Receipt:

Condition/Cooler Temp: 2.6 °C

Relinquished by:	DATE	TIME	Received by:	Relinquished by:	DATE	TIME	Received by:
[signature]	10/11/16	10:05	[signature] 10/27/16 9:15				
Relinquished by:	DATE	TIME	Received by:	Relinquished by:	DATE	TIME	Received by:

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RAW DATA

Available upon request

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