OCCU-TEC
100 NW Business Park Lane
Riverside, MO 64150
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February 15, 2019

Ms. Diane Czarnecki
Industrial Hygienist
Facilities Management Division
GSA Public Buildings Service – Heartland Region
2300 Main Street
Kansas City, Missouri 64108

RE: Goodfellow Federal Center - Metals in Air Investigation
Building – #105F
4300 Goodfellow Boulevard
St. Louis, Missouri 63120
OCCU-TEC Project No. 918004

Dear Ms. Czarnecki:

Thank you for the opportunity to assist the General Services Administration (GSA) with the Resource Conservation and Recovery Act (RCRA) metals air sampling investigation of the above referenced buildings located at the Goodfellow Federal Center, in St. Louis, Missouri. OCCU-TEC understands that the purpose of the investigation was to provide sampling data regarding pre-existing conditions noted in investigation reports previously prepared for the facility. The following report summarizes the sample collection activities and the laboratory analytical results of the samples submitted.

On January 23, 2019, Missouri licensed air sampling professionals from OCCU-TEC conducted air sampling for the presence of seven of the RCRA metals including Silver, Arsenic, Barium, Cadmium, Chromium, Lead, and Selenium. Sampling was conducted on Building #105F.

The proposed sampling scheme, the numbers of samples, sample distribution and general methodology was developed based on previous investigation methodology and in coordination with the GSA. Sample locations were determined by OCCU-TEC field personnel while on-site.

Resource Conservation and Recovery Act Metals Air Sampling

Air sampling for RCRA metals was collected on 37-millimeter (mm) cassettes with 0.8 micrometer (µm) mixed cellulose ester (MCE) filters using powered air sampling pumps in accordance with National Institute for Occupational Safety and Health (NIOSH) sampling methods. Samples were collected in a method sufficient to collect a minimum sample volume of 300 liters. Air samples were submitted under chain-of-custody to Scientific Analytical Institute, Inc. (SAI), for independent analysis of RCRA metals in accordance with NIOSH Method 7300. SAI is accredited by the American Industrial Hygiene Association (AIHA) utilizing the Industrial Hygiene Proficiency Analytical Testing (IHPAT) program. SAI's IHPAT Laboratory ID is 173190.

Results of the air sampling are summarized in the table below by identifying the range of results for Building #105F for each of the seven metals that were sampled. **Samples with a "<" sign indicate that the results were below the laboratory's method reporting limit.**

Analysis	Lowest Concentration (µg/m³)	Highest Concentration (µg/m³)
Silver (Ag)	<0.68	<0.68
Arsenic (As)	<0.68	<0.68
Barium (Ba)	<0.10	<0.10
Cadmium (Cd)	<0.068	<0.068
Total Chromium (Cr) *	<0.68	1.40
Lead (Pb)	<0.35	<0.35
Selenium (Se)	<0.68	<0.68

* The laboratory reported trace amounts of total chromium above the laboratory detection limit on many samples, including field blanks. According to the lab, low levels of Chromium can be found as a contaminant in varying levels on MCE filters for different manufacturers and lots.

Results of the air samples collected indicate that **all** the air samples collected from Building #105F contained concentrations of RCRA metals below the laboratory's method reporting limit and the OSHA Permissible Exposure Limit (PEL) with the exception of total Chromium. As previously noted, the elevated total chromium results were likely due to contaminated MCE filter media. Sample locations and the corresponding results are summarized in the laboratory analytical results that are included in Appendix A. The air sampling professional's Missouri Lead license is in included in Appendix B.

It should be noted that this air sampling investigation was only a screening of airborne RCRA metals and should not be interpreted or used to determine compliance or non-compliance with OSHA personnel monitoring regulations.

OCCU-TEC appreciates the opportunity to work with GSA on this project. If you have any questions concerning this report, or if we may be of any additional service, please feel free to contact us.

Sincerely,

(b) (6)

Jeff T. Smith
Senior Project Manager

(b) (6)

Kevin Heriford
Project Manager (QA/QC)

Appendices:

A: Laboratory Analytical Results and Chain of Custody Documentation
B: Qualifications and Licenses

Appendix A

Laboratory Analytical Report and Chain of Custody Documentation

Airborne Metals Concentration by Inductively-Coupled Plasma Analysis (ICP)

NIOSH Method 7300

Client:	**Occu-Tec, Inc.**	**Attn:**	**Kevin Heriford**	**Lab Order ID:**	**71902371**
	100 NW Business Park Ln.			**Date Received:**	**01/29/2019**
	Riverside, MO 64150			**Date Reported:**	**02/05/2019**
Project:	**GFC-105F**			**Page:**	**1 of 3**

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m^3)
105F-MetA18-01	LL L33	367.5	Ag	0.25	< 0.25	< 0.68
			As	0.25	< 0.25	< 0.68
			Ba	0.038	< 0.038	< 0.10
			Cd	0.025	< 0.025	< 0.068
			Cr	0.25	0.28	0.76
			Pb	0.13	< 0.13	< 0.35
71902371IPA_1			Se	0.25	< 0.25	< 0.68
105F-MetA18-02	LL P33	367.5	Ag	0.25	< 0.25	< 0.68
			As	0.25	< 0.25	< 0.68
			Ba	0.038	< 0.038	< 0.10
			Cd	0.025	< 0.025	< 0.068
			Cr	0.25	0.51	1.4
			Pb	0.13	< 0.13	< 0.35
71902371IPA_2			Se	0.25	< 0.25	< 0.68
105F-MetA18-03	LL L31	367.5	Ag	0.25	< 0.25	< 0.68
			As	0.25	< 0.25	< 0.68
			Ba	0.038	< 0.038	< 0.10
			Cd	0.025	< 0.025	< 0.068
			Cr	0.25	< 0.25	< 0.68
			Pb	0.13	< 0.13	< 0.35
71902371IPA_3			Se	0.25	< 0.25	< 0.68

Melissa Ferrell

Analyst

(b) (6) [redacted]

Lab Director

This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by AIHA or any other agency of the U.S. government. Scientific Analytical Institute participates in the AIHA IHPAT program. IHPAT Laboratory ID: 173190. Unless otherwise noted blank sample correction was not performed on analytical results. MDLs are available upon request. Reporting limits stated above.

Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888

Airborne Metals Concentration by Inductively-Coupled Plasma Analysis (ICP)

NIOSH Method 7300

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Project:	**GFC-105F**			**Page:**	**2 of 3**

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m³)
105F-MetA18-04	LL O29	367.5	Ag	0.25	< 0.25	< 0.68
			As	0.25	< 0.25	< 0.68
			Ba	0.038	< 0.038	< 0.10
			Cd	0.025	< 0.025	< 0.068
			Cr	0.25	0.44	1.2
			Pb	0.13	< 0.13	< 0.35
71902371IPA_4			Se	0.25	< 0.25	< 0.68
105F-MetA18-05	UL P36	367.5	Ag	0.25	< 0.25	< 0.68
			As	0.25	< 0.25	< 0.68
			Ba	0.038	< 0.038	< 0.10
			Cd	0.025	< 0.025	< 0.068
			Cr	0.25	0.32	0.87
			Pb	0.13	< 0.13	< 0.35
71902371IPA_5			Se	0.25	< 0.25	< 0.68
105F-MetA18-06	UL P32	367.5	Ag	0.25	< 0.25	< 0.68
			As	0.25	< 0.25	< 0.68
			Ba	0.038	< 0.038	< 0.10
			Cd	0.025	< 0.025	< 0.068
			Cr	0.25	< 0.25	< 0.68
			Pb	0.13	< 0.13	< 0.35
71902371IPA_6			Se	0.25	< 0.25	< 0.68

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Airborne Metals Concentration by Inductively-Coupled Plasma Analysis (ICP)

NIOSH Method 7300

Client:	**Occu-Tec, Inc.**	**Attn:**	**Kevin Heriford**	**Lab Order ID:**	**71902371**
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Project:	**GFC-105F**			**Page:**	**3 of 3**

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m^3)
105F-MetA18-07	UL L29	367.5	Ag	0.25	< 0.25	< 0.68
			As	0.25	< 0.25	< 0.68
			Ba	0.038	< 0.038	< 0.10
			Cd	0.025	< 0.025	< 0.068
			Cr	0.25	< 0.25	< 0.68
			Pb	0.13	< 0.13	< 0.35
71902371IPA_7			Se	0.25	< 0.25	< 0.68
105F-MetA18-08	UL P27	367.5	Ag	0.25	< 0.25	< 0.68
			As	0.25	< 0.25	< 0.68
			Ba	0.038	< 0.038	< 0.10
			Cd	0.025	< 0.025	< 0.068
			Cr	0.25	< 0.25	< 0.68
			Pb	0.13	< 0.13	< 0.35
71902371IPA_8			Se	0.25	< 0.25	< 0.68
105F-MetA18-09	Field Blank	-	Ag	0.25	< 0.25	--
			As	0.25	< 0.25	--
			Ba	0.038	< 0.038	--
			Cd	0.025	< 0.025	--
			Cr	0.25	0.29	--
			Pb	0.13	< 0.13	--
71902371IPA_9			Se	0.25	< 0.25	--

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Analyst

(b) (6) [redacted]

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Scientific Analytical Institute
4604 Dundas Dr. Greensboro, NC 27407
Phone: 336.292.3888 Fax: 336.292.3313
www.sailab.com lab@sailab.com

Lab Use Only
Lab Order ID: 1190237 1
Client Code: _____

Contact Information	
Company Name:	Occu-TEC, Inc
Address:	100 NW Business Park Ln
	Riverside, MO 64150
Contact:	Kevin Heriford
Phone ☐:	816-825-0628
Fax ☐:	816-994-3466
Email ☐:	Kheriford@occutec.com
PO Number:	918504
Project Name/Number:	GFC-105F

Billing/Invoice Information	
Company:	Same
Address:	
Contact:	Ap@occutec.com
Phone ☐:	
Fax ☐:	
Email ☐:	Ap@occutec.com

Lead Test Types		
Paint Chips by Flame AA (PBP) ☐	Soil by Flame AA (PBS) ☐	Other ☒
Wipe by Flame AA (PBW) ☐	Air by Flame AA (PBA) ☐	RCRA 8 w/o Hg

Turn Around Times			
3 Hours	☐	72 Hours	☐
6 Hours	☐	96 Hours	☐
12 Hours	☐	120 Hours	☐
24 Hours	☐	144+ Hours	☒
48 Hours	☐	Standard turn	

Sample ID #	Description/Location	Volume/Area	Comments
105F-MetA18-01	LL L33	367.5	
105F-MetA18-02	LL P33	367.5	
105F-MetA18-03	LL L31	367.5	
105F-MetA18-04	LL O29	367.5	
105F-MetA18-05	LL P36	367.5	
105F-MetA18-06	LL P32	367.5	
105F-MetA18-07	LL L29	367.5	
105F-MetA18-08	LL P27	367.5	
105F-MetA18-09	Field Blank	N/A	

Accepted ☒
Rejected ☐

Total Number of Samples _____

Relinquished by	Date/Time	Received by	Date/Time
		(b) (6)	
			1128 1030A

Page ____ of ____

Appendix B

Qualifications and Licenses

STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Austin G. O'Byrne

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Risk Assessor
Category of License

Issuance Date:	**12/10/2018**
Expiration Date:	**12/10/2020**
License Number:	**181210-300005671**

(b) (6) [redacted]

Randall W. Williams, MD, FACOG
Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102