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November 26, 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 - Mercury Air Sampling Investigation  
Building – #110  
4300 Goodfellow Boulevard  
St. Louis, Missouri 63120  
OCCU-TEC Project No. 919103**

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 November 6, 2019, Missouri licensed air sampling professionals from OCCU-TEC conducted air sampling for the presence of airborne particulate mercury in Building #110.

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 particulate mercury was collected on 37-millimeter (mm) cassettes with 0.8 micrometer ( $\mu\text{m}$ ) 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 collected in accordance with NIOSH Method 7300 and submitted under chain-of-custody to Scientific Analytical Institute, Inc. (SAI), for independent analysis of mercury in accordance with NIOSH Method 6009. 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 #110 for the metal sampled. **Samples with a “<” sign indicate that the results were below the laboratory’s method reporting limit.**

Analysis	Lowest Concentration ( $\mu\text{g}/\text{m}^3$ )	Highest Concentration ( $\mu\text{g}/\text{m}^3$ )
Mercury (Hg)	<0.057	<0.057

Results of the air samples collected indicate Building #110 contained concentrations of particulate mercury below the laboratory’s method reporting limit and the OSHA Permissible Exposure Limit (PEL). Sample location diagrams are attached is Appendix A. Sample locations and the corresponding results are summarized in the laboratory analytical results that are included in Appendix B. The air sampling professional’s Missouri Lead license is in included in Appendix C.

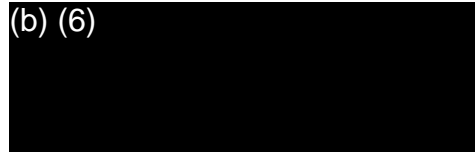
It should be noted that this air sampling investigation was only a screening of airborne particulate mercury and should not be interpreted or used to determine compliance or non-compliance with OSHA personnel monitoring regulations.

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 Smith,  
Senior Project Manager

(b) (6)  


Kevin Heriford  
Environmental Operations Manager (QA/QC)

Appendices:

- A: Sample Location Diagrams
- B: Laboratory Analytical Results and Chain of Custody Documentation
- C: Qualifications and Licenses



# **Appendix A**

## Sample Location Diagrams



(b) (7)(F)

**Figure 1: Air Sample Location Maps—Bldg. 110—First Floor**

Goodfellow Federal Center  
4300 Goodfellow Boulevard  
St. Louis, Missouri  
Project Number: 919103

(b) (7)(F)

**Figure 1: Air Sample Location Maps—Bldg. 110—Second Floor**

Goodfellow Federal Center  
4300 Goodfellow Boulevard  
St. Louis, Missouri  
Project Number: 919103

# **Appendix B**

## Laboratory Analytical Results and Chain of Custody Documentation





# Airborne Mercury Concentration by Cold Vapor-Atomic Absorption (CVAA)

NIOSH Method 6009/OSHA ID-140



<b>Client:</b>	OCCU-TEC Inc. 2604 NE Industrial Dr #230 North Kansas City, MO 64117	<b>Attn:</b>	Austin O'Byrne	<b>Lab Order ID:</b>	71928709
				<b>Date Received:</b>	11/11/2019
<b>Project:</b>	919103.001			<b>Date Reported:</b>	11/18/2019
				<b>Page:</b>	1 of 1

Sample ID	Description	Sampling Type	Volume (L)	Concentration (µg)	Concentration (µg/m <sup>3</sup> )
Lab Sample ID	Lab Notes				
110-Hg-01	Field blank	Particulate	-	< 0.025	-
71928709HGA_1					
110-Hg -02	Lower level – K14	Particulate	436.8	< 0.025	< 0.057
71928709HGA_2					
110-Hg -03	Lower level – E11	Particulate	436.8	< 0.025	< 0.057
71928709HGA_3					
110-Hg-04	Upper level – P13	Particulate	436.8	< 0.025	< 0.057
71928709HGA_4					
110-Hg -05	Upper level – D6	Particulate	436.8	< 0.025	< 0.057
71928709HGA_5					
110-Hg -06	Upper level – H3	Particulate	436.8	< 0.025	< 0.057
71928709HGA_6					

Melissa Ferrell

**Analyst**

(b) (6)

**Lab Director**

This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. 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. The reporting limit for an undiluted air sample is 0.01µg total Mercury. Analytical uncertainty available upon request.





**Scientific Analytical Institute, Inc.**

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: 71928709  
 Client Code: \_\_\_\_\_

Company Contact Information	
Company: OCCU-TEC Inc.	Contact: Austin O'Byrne
Address: 2604 NE Industrial Drive, Suite 230	Phone ☐: 816-602-0819
North Kansas City, MO 64117	Fax ☐: 816-994-3417
	Email : aobyrne@occutec.com

Industrial Hygiene Test Types	
Silica as Alpha Quartz (XSZ)* ☐	With Respirable Dust (XDZ) ☐
Silica as Cristobalite (XSC)* ☐	With Respirable Dust (XDC) ☐
Silica as Tridymite (XST)* ☐	With Respirable Dust (XDT) ☐
Silica as Alpha Quartz, Cristobalite, Tridymite (XSA)* ☐	With Respirable Dust (XDA) ☐
Silica Bulk (XSI)*	☐
Bulk Phase ID/Whole Rock (XUK)	☐
Total Dust NIOSH Method 0500 (GTD)	☐
Respirable Dust NIOSH Method 0600 (GRD)	☐
PCM NIOSH 7400-A Rules (PCM)	☐
B Rules (PCB) ☐	TWA (PTA) ☐
TEM NIOSH 7402 (Asbestos) (TNI)	☐
Hexavalent Chromium (OSHA ID-215) (Note if from spray paint operations)	☐
Metals (NIOSH 7300) (Specify Metals Under Comments)	☐
Other NIOSH 6000 - Mercury Air Samples	☒
* Modified NIOSH 7500 OSHA ID 142	

Billing/Invoice Information	Turn Around Times <sup>^</sup>	
SAME ☒	90 Min. ☐	48 Hours ☐
Company:	3 Hours ☐	72 Hours ☐
Contact:	6 Hours ☐	96 Hours ☐
Address:	12 Hours ☐	120 Hours ☒
	24 Hours ☐	144 <sup>+</sup> Hours ☐
	<sup>^</sup> TATs not available for certain test types	
PO Number:		
Project Name/Number: 919103.001		

Sample ID #	Description/Location	Volume/Area	Comments
110-Hg-01	Field Blank	N/A	Mercury Air Samples
110-Hg-02	Lower level - K14	436.8	Mercury Air Samples
110-Hg-03	Lower level - E11		Mercury Air Samples
110-Hg-04	Upper level - P13		Mercury Air Samples
110-Hg-05	Upper level - D6		Mercury Air Samples
110-Hg-06	Upper level - H3		Mercury Air Samples

Accepted ☒  
 Rejected ☐

Total # of Samples \_\_\_\_\_

Relinquished by	Date/Time	Received by	Date/Time
(b) (6)	11/8/19	(b) (6)	11-11 10:30

Page \_\_\_\_\_ of \_\_\_\_\_

# **Appendix C**

## 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)

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

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