

June 29, 2018

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 #105 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 Complex, in St. Louis, Missouri. OCCU-TEC, Inc. (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 April 10, 2018, Missouri licensed air sampling professionals from OCCU-TEC conducted air sampling for the presence of seven (7) of the RCRA metals including Silver, Arsenic, Barium, Cadmium, Chromium, Lead, and Selenium within Building #105.

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 and samples collected from discretionary 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 methodology. 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 according to NIOSH Method 7300. SAI is accredited by the American Industrial Hygiene Association (AIHA) utilizing the Industrial Hygiene Proficiency Analytical Testing (IHPAT) program. SAI's AIHA IHPAT Laboratory identification number is 173190.

Results of the air sampling are summarized in the table below by identifying the range of results for Building 105 for each of the seven (7) metals that were sampled. Samples with a "<" sign indicate that the results were below the laboratory's method reporting limit.

Analysis	Lowest	Highest
	Concentration	Concentration
	$(\mu g/m^3)$	$(\mu g/m^3)$
Silver Ag	<2.5	<9.0
Arsenic As	< 0.77	< 5.6
Barium Ba	< 0.56	< 0.90
Cadmium Cd	< 0.077	< 0.077
Total Chromium Cr	< 5.6	<9.0
Lead Pb	< 0.40	< 0.40
Selenium Se	< 0.77	< 0.77

Results indicate that **all** of the 26 air samples collected from Building 105 contained concentrations of RCRA metals below the laboratory's method reporting limit or the OSHA Permissible Exposure Limit (PEL). Sample locations and the corresponding result are summarized in the enclosed laboratory analytical report. The air sampling professional's Missouri Lead license is in included in Appendix A.

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,



Jeff T. Smith Senior Project Manager



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

Occu-Tec, Inc. **Client:**

100 NW Business Park Ln.

Riverside, MO 64150

918004.002

Attn: **Justin Arnold**

Lab Order ID: **Date Received:**

11809536 04/17/2018

Date Reported:

04/27/2018

Date Amended:

05/03/2018

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Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	(L)	Element	Limit (µg)	Concentration (μg)	Concentration (μg/m³)
			Ag	1.8	<1.8	<5.6
			As	1.8	<1.8	<5.6
105-MetA18-01	1 st Floor		Ba	0.18	<0.18	< 0.56
103-WetA18-01	column H52	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	< 5.6
			Pb	0.13	<0.13	< 0.40
11809536IPA_1			Se	0.25	< 0.25	< 0.77
	1 st Floor	323.2	Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	<0.77
105-MetA18-02			Ba	0.29	< 0.29	< 0.90
103-WetA18-02	column B48		Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	< 0.13	< 0.40
11809536IPA_2			Se	0.25	<0.25	<0.77
			Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	<0.77
105 M. (A 10.02	1 st Floor	323.2	Ba	0.29	<0.29	< 0.90
105-MetA18-03	column H45		Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	< 0.13	< 0.40
11809536IPA_3			Se	0.25	< 0.25	<0.77

Melissa Ferrell/Daniel Olson

Analyst

Lab Director



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



NIOSH Method 7300

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Riverside, MO 64150

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04/17/2018 04/27/2018

05/03/2018

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Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	(L)	Element	Limit (µg)	(µg)	(μg/m ³)
			Ag	0.80	< 0.80	<2.5
			As	0.25	< 0.25	< 0.77
105-MetA18-04	1 st Floor		Ba	0.18	<0.18	< 0.56
103-MetA18-04	column G40	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	<5.6
			Pb	0.13	<0.13	< 0.40
11809536IPA_4			Se	0.25	< 0.25	< 0.77
	1 st Floor column C35		Ag	2.9	<2.9	<9.0
		323.2	As	0.25	< 0.25	< 0.77
105-MetA18-05			Ba	0.29	< 0.29	< 0.90
105-MetA18-05			Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	< 0.13	< 0.40
11809536IPA_5			Se	0.25	<0.25	< 0.77
			Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.77
105 M. (A 10.05	1 st Floor		Ba	0.29	<0.29	< 0.90
105-MetA18-06	column B31	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_6			Se	0.25	< 0.25	<0.77

(b) (6) Melissa Ferrell/Daniel Olson Analyst Lab Director



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



NIOSH Method 7300

Client: Occu-Tec, Inc.

100 NW Business Park Ln.

Riverside, MO 64150

918004.002

Attn: Justin Arnold

Lab Order ID: Date Received: 11809536

Date Reported:
Date Amended:

04/17/2018 04/27/2018

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Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	(L)	Diement	Limit (µg)	(µд)	(μg/m ³)
			Ag	2.9	<2.9	<9.0
			As	0.25	<0.25	< 0.77
105-MetA18-07	1 st Floor		Ba	0.29	<0.29	< 0.90
103-MetA18-07	column H21	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_7			Se	0.25	<0.25	< 0.77
	1 st Floor	323.2	Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.77
105-MetA18-08			Ba	0.29	< 0.29	< 0.90
105-MetA18-08	column E19		Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_8			Se	0.25	<0.25	< 0.77
			Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.77
105 M. (A 10.00	1 st Floor		Ba	0.29	<0.29	< 0.90
105-MetA18-09	column F15	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_9			Se	0.25	< 0.25	<0.77

Melissa Ferrell/Daniel Olson

Analyst

Lab Director



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



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11809536

Date Received: Date Reported: 04/17/2018 04/27/2018

05/03/2018

Date Amended: 918004.002 **Project:** Page: 4 of 9

Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	(L)	Element	Limit (µg)	(μg)	(µg/m³)
			Ag	2.9	<2.9	<9.0
			As	0.25	<0.25	< 0.77
105-MetA18-10	1 st Floor		Ba	0.29	<0.29	< 0.90
103-WetA18-10	column F13	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_10			Se	0.25	<0.25	< 0.77
	1 st Floor column C10		Ag	2.9	<2.9	<9.0
		323.2	As	0.25	< 0.25	< 0.77
105-MetA18-11			Ba	0.29	<0.29	< 0.90
103-WetA18-11			Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_11			Se	0.25	<0.25	< 0.77
			Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.77
105-MetA18-12	1 st Floor		Ba	0.29	<0.29	< 0.90
103-MetA18-12	column H4	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_12			Se	0.25	<0.25	< 0.77

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



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Riverside, MO 64150

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Date Received: Date Reported: Date Amended:

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Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	(L)	Liement	Limit (µg)	Concentration (μg)	Concentration (μg/m³)
			Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.77
105-MetA18-13	2 nd Floor		Ba	0.29	< 0.29	< 0.90
105-MetA18-15	column G3	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_13			Se	0.25	<0.25	< 0.77
	2 nd Floor column F7	323.2	Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.77
105-MetA18-14			Ba	0.29	< 0.29	< 0.90
105-MetA18-14			Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	< 0.13	< 0.40
11809536IPA_14			Se	0.25	<0.25	<0.77
			Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.77
105 M., A10 15	2 nd Floor		Ba	0.29	<0.29	< 0.90
105-MetA18-15	column B10	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	< 0.13	< 0.40
11809536IPA_15			Se	0.25	< 0.25	< 0.77

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Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	Volume (L)	Element	Limit (μg)	Concentration (μg)	Concentration (μg/m ³)
			Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.77
105-MetA18-16	2 nd Floor		Ba	0.29	< 0.29	< 0.90
103-MetA18-10	column E12	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_16			Se	0.25	< 0.25	< 0.77
	2 nd Floor	323.2	Ag	2.9	<2.9	<9.0
			As	0.25	< 0.25	< 0.077
105-MetA18-17			Ba	0.29	< 0.29	< 0.90
103-MetA18-17	column D19		Cd	0.025	< 0.025	< 0.077
			Cr	2.9	<2.9	<9.0
			Pb	0.13	<0.13	< 0.40
11809536IPA_17			Se	0.25	<0.25	< 0.77
			Ag	1.8	<1.8	<5.6
			As	0.25	< 0.25	< 0.77
105 M. (A 10 10	2 nd Floor		Ba	0.18	<0.18	< 0.56
105-MetA18-18	column H24	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	<5.6
			Pb	0.13	<0.13	<0.40
11809536IPA_18			Se	0.25	<0.25	<0.77

Melissa Ferrell/Daniel Olson Analyst **Lab Director**



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



NIOSH Method 7300

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11809536 04/17/2018

Date Received: Date Reported: Date Amended:

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Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	(L)	Element	Limit (µg)	(μg)	(µg/m³)
			Ag	1.8	<1.8	< 5.6
			As	0.25	<0.25	< 0.77
105-MetA18-19	2 nd Floor		Ba	0.18	<0.18	< 0.56
103-WetA16-19	column E31	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	< 5.6
			Pb	0.13	<0.13	< 0.40
11809536IPA_19			Se	0.25	< 0.25	< 0.77
	2 nd Floor column F35	323.2	Ag	1.8	<1.8	< 5.6
			As	0.25	< 0.25	< 0.77
105-MetA18-20			Ba	0.18	<0.18	< 0.56
103-WetA16-20			Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	< 5.6
			Pb	0.13	<0.13	< 0.40
11809536IPA_20			Se	0.25	<0.25	< 0.77
			Ag	1.8	<1.8	< 5.6
			As	0.25	< 0.25	< 0.77
105 M-4A19 21	2 nd Floor		Ba	0.18	<0.18	< 0.56
105-MetA18-21	column B42	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	<5.6
			Pb	0.13	<0.13	< 0.40
11809536IPA_21			Se	0.25	<0.25	< 0.77

Melissa Ferrell/Daniel Olson Analyst Lab Director



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



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11809536 04/17/2018

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Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	(L)	Element	Limit (µg)	(μg)	(μg/m ³)
			Ag	1.8	<1.8	< 5.6
			As	0.25	<0.25	< 0.77
105-MetA18-22	2 nd Floor		Ba	0.18	<0.18	< 0.56
105-MetA18-22	column G43	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	<5.6
			Pb	0.13	<0.13	< 0.40
11809536IPA_22			Se	0.25	<0.25	< 0.77
	2 nd Floor		Ag	1.8	<1.8	< 5.6
		323.2	As	0.25	<0.25	< 0.77
105 M. (A 10 22			Ba	0.18	<0.18	< 0.56
105-MetA18-23	column E51		Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	<5.6
			Pb	0.13	<0.13	< 0.40
11809536IPA_23			Se	0.25	<0.25	<0.77
			Ag	1.8	<1.8	< 5.6
			As	0.25	<0.25	< 0.77
105-MetA18-24	Exterior roof		Ba	0.18	<0.18	< 0.56
105-MetA18-24	south side	323.2	Cd	0.025	< 0.025	< 0.077
			Cr	1.8	<1.8	<5.6
			Pb	0.13	<0.13	< 0.40
11809536IPA_24			Se	0.25	<0.25	< 0.77

Melissa Ferrell/Daniel Olson

Analyst

(b) (6)

Lab Director



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



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Sample ID	Description	Volume	Element	Reporting	Concentration	Concentration
Lab Sample ID	Lab Notes	(L)	Element	Limit (µg)	(μg)	(μg/m ³)
			Ag	1.8	<1.8	-
			As	0.25	<0.25	-
105-MetA18-25	Blank		Ba	0.18	<0.18	-
105-MetA18-25	Біапк	-	Cd	0.025	< 0.025	-
			Cr	1.8	<1.8	-
			Pb	0.13	<0.13	-
11809536IPA_25			Se	0.25	<0.25	-
			Ag	1.8	<1.8	-
			As	0.25	<0.25	-
105-MetA18-26	Blank		Ba	0.18	<0.18	-
103-MetA18-20	Dialik	-	Cd	0.025	< 0.025	-
			Cr	1.8	<1.8	-
			Pb	0.13	<0.13	-
11809536IPA_26			Se	0.25	<0.25	-

Melissa Ferrell/Daniel Olson

Analyst

Lab Director

Appendix B Qualifications and Licenses





Missouri Department of Health and Senior Services

P.O. Box 570, Jefferson City, MO 65102-0570 Phone: 573-751-6400 FAX: 573-751-6010 RELAY MISSOURI for Hearing and Speech Impaired 1-800-735-2966 VOICE 1-800-735-2466



Jeremiah W. (Jay) Nixon Governor

Peter Lyskowski Acting Director

May 27, 2016

Justin Arnold Occu-Tec, Inc. 100 NW Business Park Lane Riverside, MO 64150

Dear Licensee:

After review of your renewal application for a license with the Missouri Department of Health and Senior Services' Lead Licensing Program, your application for a Lead Risk Assessor license has been approved.

Enclosed is your Lead Risk Assessor license certificate and photo identification badge. Please have your identification badge with you at all times while conducting lead abatement activities.

Note the date your Lead Risk Assessor license expires. A renewal application and information will be mailed to you approximately three months before your license expiration date and will need to be completed and submitted 60 days prior to the expiration date.

A requirement of renewing your application will be attending a Lead Risk Assessor refresher class. A list of Missouri accredited lead abatement training providers will be included in your renewal packet. Additional information on training and lead abatement in general can be found at http://health.mo.gov/safety/leadlicensing/index.php.

Please contact the Lead Licensing Program at (573) 526-5873 or (888) 837-0927 if you have any questions concerning this letter or on lead abatement regulations in general.

Sincerely,

(b) (6)

Angie DeBroeck Lead Licensing Program

AKD:ss

Enclosures

Missouri Department of Health and Senior Services

Lead Occupation License - ID Badge License Number: 120611-300003622

Lead Risk Assessor

JUSTIN ARNOLD

Expiration Date: 06/11/2018

www.health.mo.gov

11-14- mm

Healthy Missourians for The Missouri Department of Health and Senior Services will be the leader



7/5/2011

Date

(b) (6)

Director of Air Pollution Control Program

