



2604 NE Industrial Drive, Suite 230
North Kansas City, Missouri 64117
Telephone: 816.231.5580
Fax: 816.231.5641
www.occutec.com

October 31, 2019

Diane Czarnecki
Industrial Hygienist
Facilities Management Division
GSA Public Buildings Service - Heartland Region
2300 Main Street, Kansas City, MO 64108

**RE: Goodfellow Federal Center – Bldg. # 103 Air Sampling for Total Chromium
Project # 919103**

Dear Ms. Czarnecki:

Thank you for the opportunity to provide the General Services Administration (GSA) with the above referenced environmental sampling activities. The following is our report.

INTRODUCTION

As requested, OCCU-TEC, Inc. (OCCU-TEC) conducted air sampling for the presence of total chromium at Building #103 of the Goodfellow Federal Center (GFC) located at 4300 Goodfellow Federal Boulevard in St. Louis, Missouri. Sampling was completed in response to the ongoing environmental condition assessment at the GFC which is documented at the GFC Reading Room located at:
<https://www.gsa.gov/portal/content/212361>.

Air sampling was conducted to determine the current levels of total chromium in representative locations throughout the building. Air sampling at Bldg. #103D was conducted on September 19, 2019 by Mr. Austin O'Byrne of OCCU-TEC.

METHODOLOGY

Air sampling for chromium was collected on 37-millimeter (mm) cassettes with 0.5 micrometer (μm) polyvinyl chloride (PVC) 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 chromium 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.

Air sampling for the presence of chromium was conducted at twenty-four (24) distinct locations within Building #103. A total of twenty-seven (27) samples were obtained including field blanks. Sample location diagrams are attached as Appendix B. The air sampling professional's Missouri Lead license is included in Appendix D.

RESULTS AND DISCUSSION

A summary table of all sampling locations is included in Appendix A. The complete laboratory report for the air sampling from Scientific Analytical Institute is attached in Appendix C.

All results were below the Agency for Toxic Substances and Disease Registry (ATSDR) minimum risk level (MRL), and the NIOSH recommended exposure limit (REL). Two samples had results at detectable levels. 103-Cr-12 from the Upper Level at Column D-35 resulted in a Chromium concentration of 1.40 micrograms per cubic meter. 103-Cr-15 from the Lower Level at Column H-3 had a concentration of 1.30 micrograms per cubic meter.

LIMITATIONS

The scope of this assessment was limited in nature. OCCU-TEC collected samples from a select number of locations in an effort to minimize cost while providing a general overview of the air quality at the site. Samples were only analyzed for chromium in accordance with the scope of services requested by GSA. OCCU-TEC is not responsible for potential contaminants not identified in this report.

This report was prepared for the sole use of GSA. Reliance by any party other than GSA is expressly forbidden without OCCU-TEC's written permission. Any parties relying on the report, with OCCU-TEC's written permission, are bound by the terms and conditions outlined in the original proposal as if said proposal was prepared for them.

OCCU-TEC appreciates the opportunity to work with the GSA on this project. Please contact us if you have any questions regarding this report or if we may be of any additional service.

Sincerely,

(b) (6)

Jeff T. Smith
Senior Project Manager

(b) (6)

Austin O'Byrne
Environmental Scientist (QA/QC)

ATTACHMENTS

Appendix A, Sample Summary by Location

Appendix B, Sample Location Diagrams

Appendix C, Laboratory Analytical Results and Chain of Custody Documentation

Appendix D, Qualifications and Licenses



Appendix A

Sample Summary by Location



Goodfellow Federal Center - Building # 103 - Air Sample Data

Sample Number	Location	Analyte	Result ($\mu\text{g}/\text{m}^3$)	Minimal Risk Level *(MRL) ($\mu\text{g}/\text{m}^3$)	Recommended Exposure Limit** (REL) ($\mu\text{g}/\text{m}^3$)
103-Cr-01	Field Blank	Chromium	< 1.20	5.00	500.00
103-Cr-02	Lower Level at Column H-38	Chromium	< 1.20	5.00	500.00
103-Cr-03	Lower Level at Column F-39	Chromium	< 1.20	5.00	500.00
103-Cr-04	Lower Level at Column A-33	Chromium	< 1.20	5.00	500.00
103-Cr-05	Lower Level at Column B-31	Chromium	< 1.20	5.00	500.00
103-Cr-06	Lower Level at Column B-22	Chromium	< 1.20	5.00	500.00
103-Cr-07	Lower Level at Column G-33	Chromium	< 1.20	5.00	500.00
103-Cr-08	Upper Level at Column H-33	Chromium	< 1.20	5.00	500.00
103-Cr-09	Upper Level at Column G-37	Chromium	< 1.20	5.00	500.00
103-Cr-10	Upper Level at Column E-33	Chromium	< 1.20	5.00	500.00
103-Cr-11	Upper Level at Column B-39	Chromium	< 1.20	5.00	500.00
103-Cr-12	Upper Level at Column D-35	Chromium	1.40	5.00	500.00
103-Cr-13	Upper Level at Column J-27	Chromium	< 1.20	5.00	500.00
103-Cr-14	Field Blank	Chromium	< 1.20	5.00	500.00
103-Cr-15	Lower Level at Column H-3	Chromium	1.30	5.00	500.00
103-Cr-16	Lower Level at Column G-5	Chromium	< 1.20	5.00	500.00
103-Cr-17	Lower Level at Column C-6	Chromium	< 1.20	5.00	500.00
103-Cr-18	Lower Level at Column C-13	Chromium	< 1.20	5.00	500.00
103-Cr-19	Lower Level at Column G-15	Chromium	< 1.20	5.00	500.00
103-Cr-20	Lower Level at Column H-19	Chromium	< 1.20	5.00	500.00
103-Cr-21	Upper Level at Column B-10	Chromium	< 1.20	5.00	500.00
103-Cr-22	Upper Level at Column D-5	Chromium	< 1.20	5.00	500.00
103-Cr-23	Upper Level at Column G-6	Chromium	< 1.20	5.00	500.00
103-Cr-24	Upper Level at Column G-12	Chromium	< 1.20	5.00	500.00
103-Cr-25	Upper Level at Column F-16	Chromium	< 1.20	5.00	500.00
103-Cr-26	Upper Level at Column C-19	Chromium	< 1.20	5.00	500.00
103-Cr-27	Field Blank	Chromium	< 1.20	5.00	500.00

* MRLs are Agency for Toxic Substances and Disease Registry (ATSDR) estimates of the amount of a chemical a person can eat, drink, or breathe each day without a detectable risk to health

**RELs are based on Appendix C (Supplementary Exposure Limits) of the National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards, DHHS (NIOSH) Publication No. 2005-149. Revised September 2007.

Indicates results at or above MRL

Appendix B

Sample Location Diagrams



(b) (7)(F)

Figure 1: Air Sample Location Maps—Bldg. 103—First Floor
Goodfellow Federal Center
4300 Goodfellow Boulevard
St. Louis, Missouri
Project Number: 919103

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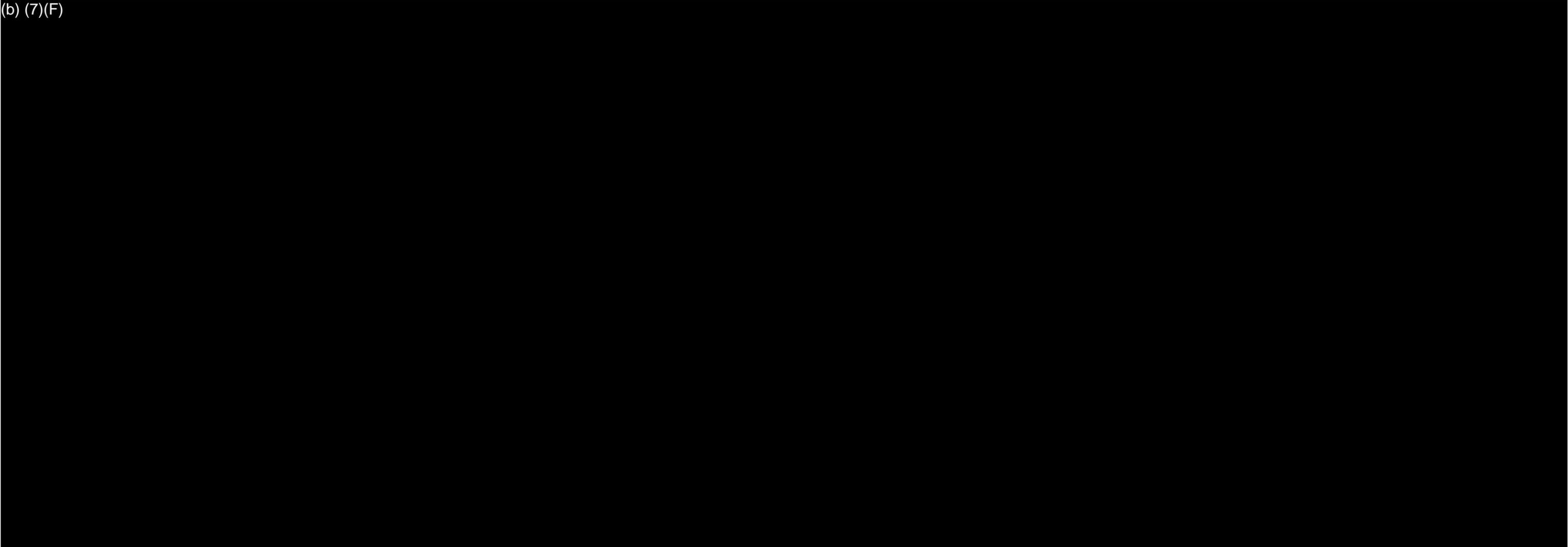


Figure 1: Air Sample Location Maps—Bldg. 103—Second Floor
Goodfellow Federal Center
4300 Goodfellow Boulevard
St. Louis, Missouri
Project Number: 919103

Appendix C

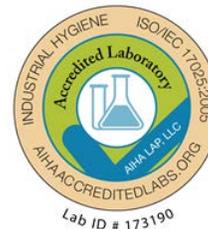
Laboratory Analytical Results and Chain of Custody Documentation





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

NIOSH Method 7303



Client: OCCU-TEC Inc. 2604 NE Industrial Drive, Ste 230 North Kansas City, MO 64117	Attn: Justin Arnold	Lab Order ID: 71925011 Date Received: 09/26/2019 Date Reported: 10/02/2019 Date Amended: 10/08/2019
Project: 919103.001 GFC	Page: 1 of 4	

Sample ID	Description	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m ³)
<i>Lab Sample ID</i>	<i>Lab Notes</i>					
103-Cr-01	FB	-	Cr	0.50	< 0.50	-
71925011IPA_1						
103-Cr-02	LL H38	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_2						
103-Cr-03	LL F39	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_3						
103-Cr-04	LL A33	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_4						
103-Cr-05	LL B31	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_5						
103-Cr-06	LL B22	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_6						
103-Cr-07	LL G33	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_7						

Melissa Ferrell

Analyst

(b) (6)

Lab Director

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Project: 919103.001 GFC	Page: 2 of 4	

Sample ID	Description	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m ³)
Lab Sample ID	Lab Notes					
103-Cr-08	UL H33	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_8						
103-Cr-09	UL G37	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_9						
103-Cr-10	UL E33	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_10						
103-Cr-11	UL B39	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_11						
103-Cr-12	UL D35	403.2	Cr	0.50	0.55	1.4
71925011IPA_12						
103-Cr-13	UL J27	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_13						
103-Cr-14	FB	-	Cr	0.50	< 0.50	-
71925011IPA_14						

Melissa Ferrell

Analyst

(b) (6)

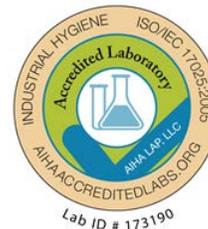
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Project: 919103.001 GFC		Page: 3 of 4

Sample ID	Description	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m ³)
Lab Sample ID	Lab Notes					
103-Cr-15	LL H3	403.2	Cr	0.50	0.53	1.3
71925011IPA_15						
103-Cr-16	LL G5	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_16						
103-Cr-17	LL C6	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_17						
103-Cr-18	LL C13	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_18						
103-Cr-19	LL G15	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_19						
103-Cr-20	LL H19	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_20						
103-Cr-21	UL B10	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_21						

(b) (6)

Melissa Ferrell

Analyst

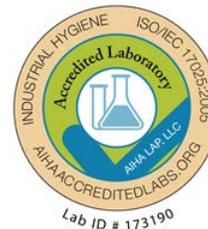
Lab Director

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NIOSH Method 7303



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2604 NE Industrial Drive, Ste 230
North Kansas City, MO 64117

Attn: Justin Arnold

Lab Order ID: 71925011
Date Received: 09/26/2019
Date Reported: 10/02/2019
Date Amended: 10/08/2019

Project: 919103.001 GFC

Page: 4 of 4

Sample ID	Description	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m ³)
Lab Sample ID	Lab Notes					
103-Cr-22	UL D5	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_22						
103-Cr-23	UL G6	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_23						
103-Cr-24	UL G12	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_24						
103-Cr-25	UL F16	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_25						
103-Cr-26	UL C19	403.2	Cr	0.50	< 0.50	< 1.2
71925011IPA_26						
103-Cr-27	FB	-	Cr	0.50	< 0.50	-
71925011IPA_27						

Melissa Ferrell

Analyst

(b) (6)

Lab Director

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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 71925011
 Lab Order ID: _____
 Client Code: _____

Company Contact Information	
Company: OCCU-TEC Inc.	Contact: Justin Arnold
Address: 2604 NE Industrial Drive, Suite 230	Phone <input type="checkbox"/> : 816-810-3276
North Kansas City, MO 64117	Fax <input type="checkbox"/> : 816-994-3478
	Email : jarnold@occutec.com

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

* Modified NIOSH 7500 OSHA ID 142

Billing/Invoice Information	Turn Around Times [^]	
SAME <input checked="" type="checkbox"/>	90 Min. <input type="checkbox"/>	48 Hours <input type="checkbox"/>
Company:	3 Hours <input type="checkbox"/>	72 Hours <input type="checkbox"/>
Contact:	6 Hours <input type="checkbox"/>	96 Hours <input type="checkbox"/>
Address:	12 Hours <input type="checkbox"/>	120 Hours <input checked="" type="checkbox"/>
	24 Hours <input type="checkbox"/>	144 ⁺ Hours <input type="checkbox"/>
	[^] TATs not available for certain test types	
PO Number:		
Project Name/Number:	919083.001 GFC	

Sample ID #	Description/Location	Volume/Area	Comments
103-Cr-01	FB	N/A	Cr
103-Cr-02	LL H38	403.2 L	Cr
103-Cr-03	LL F39		Cr
103-Cr-04	LL A33		Cr
103-Cr-05	LL B31		Cr
103-Cr-06	LL B22		Cr
103-Cr-07	LL G33		Cr
103-Cr-08	UL H33		Cr
103-Cr-09	UL G37		Cr
103-Cr-10	UL E33		Cr
103-Cr-11	UL B39		Cr
103-Cr-12	UL D35		Cr
103-Cr-13	UL J27		Cr

Relinquished by (b) (6)	Date/Time 9/24/19 17:00	Received by (b) (6)	Date/Time 9.25 10:30
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Accepted Page 1 of 2

Appendix D

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, FCOG
Director
Department of Health and Senior Services

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