



2604 NE Industrial Drive, Suite 230
North Kansas City, Missouri 64117
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January 7, 2020

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 – #102E
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 December 2nd, 2019 Missouri licensed air sampling professionals from OCCU-TEC conducted air sampling for the presence of six (6) of the RCRA metals including Silver, Arsenic, Barium, Cadmium, Lead, and Selenium. Sampling was conducted on Building #102E.

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 #102E 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 ($\mu\text{g}/\text{m}^3$)	Highest Concentration ($\mu\text{g}/\text{m}^3$)
Silver (Ag)	<0.37	<0.37
Arsenic (As)	<0.71	<0.71
Barium (Ba)	<0.071	<0.071
Cadmium (Cd)	<0.071	0.074
Lead (Pb)	<0.37	<0.37
Selenium (Se)	<0.71	<0.71

Results of the air samples collected indicate that the air samples collected from Building #102E contained concentrations of RCRA metals below the laboratory’s method reporting limit and the OSHA Permissible Exposure Limit (PEL) with the exception of Cadmium in sample number 122019-MetA-102E-05. Sample location diagrams are attached in 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 included in Appendix C.

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)

Justin Arnold, CIEC
Project Manager



(b) (6)

Jeff Smith
Senior Project 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

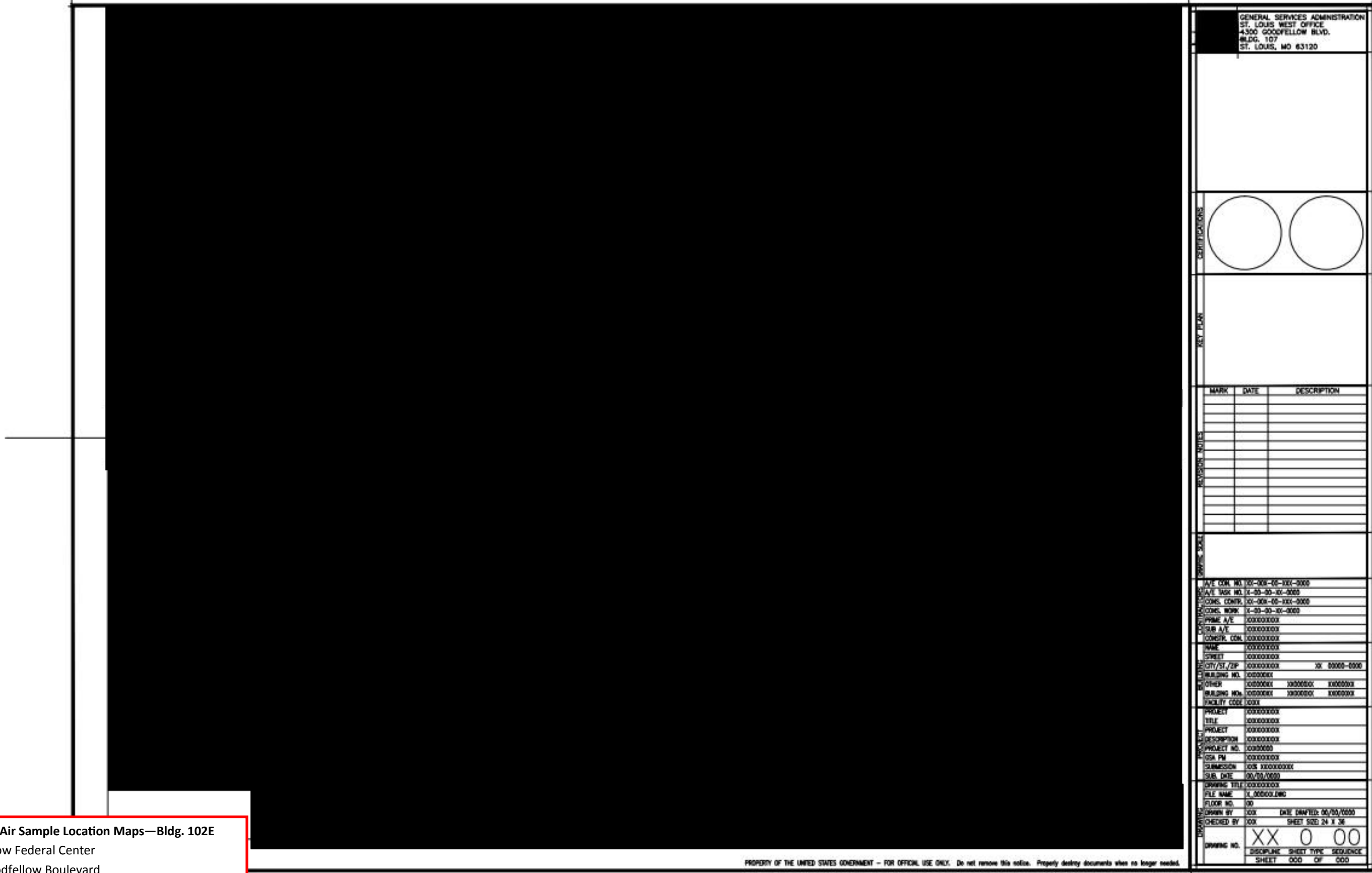
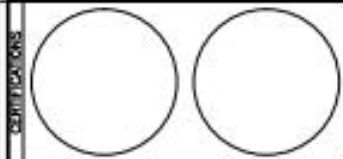


Figure 1: Air Sample Location Maps—Bldg. 102E
 Goodfellow Federal Center
 4300 Goodfellow Boulevard
 St. Louis, Missouri
 Project Number: 919103

GENERAL SERVICES ADMINISTRATION
 ST. LOUIS WEST OFFICE
 4300 GOODFELLOW BLVD.
 BLDG. 107
 ST. LOUIS, MO 63120



MARK	DATE	DESCRIPTION

A/E ORN. NO. 01-008-00-101-0000
 A/E TASK NO. 1-50-20-01-0000
 COMS. CENTER 01-008-00-101-0000
 COMS. WORK 1-50-20-01-0000
 PRIME A/E 00000000
 A/E 00000000
 CONSTR. CON. 00000000
 NAME 00000000
 STREET 00000000
 CITY/ST./ZIP 00000000 IX 00000-0000
 BUILDING NO. 00000000
 OTHER 00000000 00000000 00000000
 BUILDING NO. 00000000 00000000 00000000
 FACILITY CODE 0000
 PROJECT 00000000
 TITLE 00000000
 PROJECT 00000000
 DESCRIPTION 00000000
 PROJECT NO. 00000000
 GSA PN 00000000
 SUBMISSION 000 0000000000
 SUB DATE 00/00/0000
 DRAWING TITLE 00000000
 FILE NAME 1.000000.DWG
 FLOOR NO. 00
 DRAWN BY 000 DATE DRAWN 00/00/0000
 CHECKED BY 000 SHEET SIZE 24 x 36
 DRAWING NO. **XX 0 00**
 DISCIPLINE SHEET TYPE SEQUENCE
 SHEET 000 OF 000

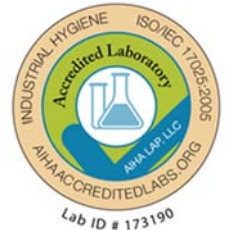
Appendix B

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, Suite 230 North Kansas City, MO 64117	Attn: Justin Arnold	Lab Order ID: 71931154
			Date Received: 12/12/2019
Project: 919103			Date Reported: 12/19/2019
			Page: 1 of 3

Sample ID	Description	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m ³)
Lab Sample ID	Lab Notes					
122019-MetA-102E-01	Field Blank	-	Ag	0.13	< 0.13	--
			As	0.25	< 0.25	--
			Ba	0.025	< 0.025	--
			Cd	0.025	< 0.025	--
			Pb	0.13	< 0.13	--
			Se	0.25	< 0.25	--
71931154IPA_1						
122019-MetA-102E-02	1 st Floor Column L21	352.8	Ag	0.13	< 0.13	< 0.37
			As	0.25	< 0.25	< 0.71
			Ba	0.025	< 0.025	< 0.071
			Cd	0.025	< 0.025	< 0.071
			Pb	0.13	< 0.13	< 0.37
			Se	0.25	< 0.25	< 0.71
71931154IPA_2						
122019-MetA-102E-03	1 st Floor Column N22	352.8	Ag	0.13	< 0.13	< 0.37
			As	0.25	< 0.25	< 0.71
			Ba	0.025	< 0.025	< 0.071
			Cd	0.025	< 0.025	< 0.071
			Pb	0.13	< 0.13	< 0.37
			Se	0.25	< 0.25	< 0.71
71931154IPA_3						

Melissa Ferrell

Analyst

(b) (6)

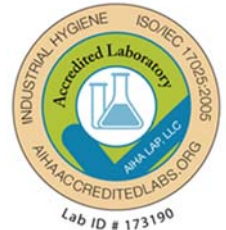
Lab Director

This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. 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.



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

NIOSH Method 7303



Client:	OCCU-TEC Inc. 2604 NE Industrial Drive, Suite 230 North Kansas City, MO 64117	Attn: Justin Arnold	Lab Order ID: 71931154
			Date Received: 12/12/2019
Project: 919103			Date Reported: 12/19/2019
			Page: 2 of 3

Sample ID	Description	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m ³)
Lab Sample ID	Lab Notes					
122019-MetA-102E-04	1 st Floor Column N26	352.8	Ag	0.13	< 0.13	< 0.37
			As	0.25	< 0.25	< 0.71
			Ba	0.025	< 0.025	< 0.071
			Cd	0.025	< 0.025	< 0.071
			Pb	0.13	< 0.13	< 0.37
			Se	0.25	< 0.25	< 0.71
71931154IPA_4						
122019-MetA-102E-05	1 st Floor Column L27	352.8	Ag	0.13	< 0.13	< 0.37
			As	0.25	< 0.25	< 0.71
			Ba	0.025	< 0.025	< 0.071
			Cd	0.025	0.026	0.074
			Pb	0.13	< 0.13	< 0.37
			Se	0.25	< 0.25	< 0.71
71931154IPA_5						
122019-MetA-102E-06	2 nd Floor Column N20	352.8	Ag	0.13	< 0.13	< 0.37
			As	0.25	< 0.25	< 0.71
			Ba	0.025	< 0.025	< 0.071
			Cd	0.025	< 0.025	< 0.071
			Pb	0.13	< 0.13	< 0.37
			Se	0.25	< 0.25	< 0.71
71931154IPA_6						

Melissa Ferrell

Analyst

(b) (6)

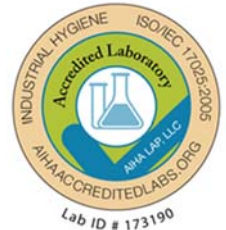
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Airborne Metals Concentration by Inductively-Coupled Plasma Analysis (ICP)

NIOSH Method 7303



Client:	OCCU-TEC Inc. 2604 NE Industrial Drive, Suite 230 North Kansas City, MO 64117	Attn: Justin Arnold	Lab Order ID: 71931154
			Date Received: 12/12/2019
Project: 919103			Date Reported: 12/19/2019
			Page: 3 of 3

Sample ID	Description	Volume (L)	Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/m ³)
Lab Sample ID	Lab Notes					
122019-MetA-102E-07	2 nd Floor Column N23	352.8	Ag	0.13	< 0.13	< 0.37
			As	0.25	< 0.25	< 0.71
			Ba	0.025	< 0.025	< 0.071
			Cd	0.025	< 0.025	< 0.071
			Pb	0.13	< 0.13	< 0.37
			Se	0.25	< 0.25	< 0.71
71931154IPA_7						
122019-MetA-102E-08	2 nd Floor Column P25	352.8	Ag	0.13	< 0.13	< 0.37
			As	0.25	< 0.25	< 0.71
			Ba	0.025	< 0.025	< 0.071
			Cd	0.025	< 0.025	< 0.071
			Pb	0.13	< 0.13	< 0.37
			Se	0.25	< 0.25	< 0.71
71931154IPA_8						
122019-MetA-102E-09	2 nd Floor Column L27	352.8	Ag	0.13	< 0.13	< 0.37
			As	0.25	< 0.25	< 0.71
			Ba	0.025	< 0.025	< 0.071
			Cd	0.025	< 0.025	< 0.071
			Pb	0.13	< 0.13	< 0.37
			Se	0.25	< 0.25	< 0.71
71931154IPA_9						

Melissa Ferrell

Analyst

(b) (6)

Lab Director

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 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: 11931154
 Client Code: _____

Company Contact Information	
Company: OCCU-TEC Inc.	Contact: Justin Arnold
Address: 2604 NE Industrial Drive, Suite 230	Phone ☐: 816-810-3276
North Kansas City, MO 64117	Fax ☐: 816-994-3478
	Email :jarnold@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 _____	☐

* 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: 919103		

Sample ID #	Description/Location	Volume/Area	Comments
122019-MetA-102E-01	Field BLANK	—	Ag, As, Ba, Cd, Pb, Se
122019-MetA-102E-02	1 st Floor Column L 21	352.8 L	Ag, As, Ba, Cd, Pb, Se
122019-MetA-102E-03	1 st Floor Column N 22	352.8 L	Ag, As, Ba, Cd, Pb, Se
122019-MetA-102E-04	1 st Floor Column N 24	352.8 L	Ag, As, Ba, Cd, Pb, Se
122019-MetA-102E-05	1 st Floor Column L 27	352.8 L	Ag, As, Ba, Cd, Pb, Se
122019-MetA-102E-06	2 nd Floor Column N 20	352.8 L	Ag, As, Ba, Cd, Pb, Se
122019-MetA-102E-07	2 nd Floor Column N 23	352.8 L	Ag, As, Ba, Cd, Pb, Se
122019-MetA-102E-08	2 nd Floor Column P 25	352.8 L	Ag, As, Ba, Cd, Pb, Se
122019-MetA-102E-09	2 nd Floor Column L 27	352.8 L	Ag, As, Ba, Cd, Pb, Se

Accepted
 Rejected

Relinquished by	Date/Time	Received by	Date/Time
(b) (6)	12/4/19 16:00	(b) (6)	12/12 10:30 A

Page 1 of 1

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, FCOG
Director
Department of Health and Senior Services

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