

Riverside, MO 64150 Telephone: 816.231.5580 Fax: 816.231.5641 www.occutec.com

November 1, 2018

Diane Czarnecki
Industrial Hygienist
Facilities Management Division
GSA Public Buildings Service - Heartland Region
U.S. General Services Administration
2300 Main Street, Kansas City, MO 64108

RE: Goodfellow Federal Center
Metals in Settled Dust Sampling – Building 110
4300 Goodfellow Boulevard
St. Louis, Missouri 63120
OCCU-TEC Project No. 918004.002

Dear Ms. Czarnecki:

Thank you for the opportunity to assist the General Services Administration (GSA) with the metals in settled dust sampling investigation of Building 110 located at the Goodfellow Federal Center (GFC), in St. Louis, Missouri. OCCU-TEC, Inc. (OCCU-TEC) understands that the purpose of the investigation was to provide additional sampling data of existing environmental conditions that are present at GFC that could adversely impact the health and safety of building occupants as well as workers at the facility. The following report summarizes the sample collection activities and the laboratory analytical results of samples submitted.

On September 18, 2018, a team of OCCU-TEC personnel including a Missouri licensed lead risk assessor, conducted settled dust sampling for the presence of seven of the Resource Conservation and Recovery Act (RCRA) target metals (lead, arsenic, barium, cadmium, total chromium, selenium, and silver) from various surfaces within mechanical rooms, basements, penthouses, stairwells leading to and from basements or penthouses, and the sub-floor below the raised flooring. The purpose of this testing was to further characterize the presence and concentration of target metals in areas of the buildings that have had little or no previous testing.

The proposed sampling scheme, the number of samples, the sample distribution and general methodology was developed by GSA and OCCU-TEC. Specific sample locations were determined by OCCU-TEC personnel while on-site.

#### Metals in Settled Dust Sampling

Metals in settled dust sampling was conducted within mechanical rooms, basements, penthouses, stairwells leading to and from basements or penthouses, and the sub-floor below raised flooring.

Dust wipe sampling was conducted in accordance with ASTM Standard E1728-16: Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Lead Determination. ASTM Standard E1728-16 is consistent with the methodology described in the Housing and Urban Development Guidelines and 40 CRF 745.63. The Brookhaven National Laboratory's Surface Wipe Sampling Procedure (IH75190) was also used as a guideline.

Dust wipe sampling for the target metals was conducted on a variety of representative surfaces that have the potential of being disturbed during routine janitorial work, and planned maintenance or renovation projects within the building. A representative surface area of approximately one square foot (1 SF) was measured and delineated with prefabricated, disposable templates. The dust wipe samples were collected using dedicated dust wipe cloths meeting ASTM standards. Each dust wipe cloth was pre-moistened and individually wrapped. Each sample was collected by wiping in a back and forth "S" pattern over a measured sampling area. Then, the wipe was folded over itself and the area was wiped again in a direction perpendicular to the first wipe orientation. The wipe samples were then placed into labeled, clean laboratory-supplied plastic centrifuge tubes with screw on caps. Dust wipe samples were submitted to Scientific Analytical Institute, Inc. (SAI) in Greensboro, North Carolina for Inductively Coupled Plasma (ICP) analysis of metals analysis using Environmental Protection Agency (EPA) method SW846 350B/7420.

Results of the dust wipe samples collected from the building indicate that all the 22 samples contained concentrations of target metals above laboratory detection limits. The following table identifies the range of results for each of the seven metals that were analyzed. Samples with a "<" sign indicate that the results were below the reportable limit.

Analysis	Lowest	Highest
	Concentration	Concentration
	(µg/sq. ft.)	(µg/sq. ft.)
Silver	< 0.50	4.60
Arsenic	< 0.25	10.00
Barium	10.00	270.00
Cadmium	0.09	9.10
Total Chromium	0.54	70.00
Lead	2.40	2700.00
Selenium	< 0.50	<25.00

<sup>\*</sup> Please note, these results may indicate higher than expected reporting limits due to interferences from other metals. Please refer to the laboratory reports for specific information.

Many of the samples collected contained target metals above the Brookhaven recommended levels. Based on the results of the sampling, all the subject building areas should be presumed to contain measurable levels of RCRA metals and proper precautions should be taken upon entry and exit of the subject areas to protect workers and limit the spread of dust to the outside environment.

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 - Sample Summary Table

B - Laboratory Analysis Reports

C - Licenses

# Appendix A Sample Summary Table

	Goodfellow Federal Co	enter - Building # 11	0 - Wipe Sam	ple Data		
Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limits
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 2.50	μg/ft²	** 62
			Barium	79.00	μg/ft <sup>2</sup>	
110-01	Basement at Column H-16	Floor	Cadmium	4.10	μg/ft²	** 31
			Chromium	33.00	μg/ft²	
			Lead	2700.00	μg/ft²	** 200/40
			Selenium	< 10.00	μg/ft²	
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 0.25	μg/ft²	** 62
			Barium	36.00	μg/ft²	
110-02	Basement at Column P-15	Stair Landing	Cadmium	0.44	μg/ft²	** 31
			Chromium	8.00	μg/ft²	
			Lead	140.00	μg/ft²	** 200/40
			Selenium	< 0.50	μg/ft²	
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 2.50	μg/ft <sup>2</sup>	** 62
		Top of Compressor	Barium	32.00	μg/ft <sup>2</sup>	
110-03	Basment Mechanical Room at		Cadmium	5.60	μg/ft <sup>2</sup>	** 31
	Column A-11		Chromium	30.00	μg/ft <sup>2</sup>	
			Lead	160.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 10.00	μg/ft <sup>2</sup>	
			Silver	4.60	μg/ft <sup>2</sup>	* 139/9.3
			Arsenic	< 2.50	μg/ft <sup>2</sup>	** 62
			Barium	160.00	μg/ft <sup>2</sup>	
110-04	Basement at Column B-5	Floor	Cadmium	6.20	μg/ft <sup>2</sup>	** 31
			Chromium	37.00	μg/ft <sup>2</sup>	
			Lead	900.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 5.00	μg/ft <sup>2</sup>	
			Silver	0.63	μg/ft <sup>2</sup>	* 139/9.3
			Arsenic	< 1.30	μg/ft <sup>2</sup>	** 62
			Barium	64.00	μg/ft <sup>2</sup>	<u> </u>
110-05	Basement at Column G-2	Stair Landing	Cadmium	0.60	μg/ft <sup>2</sup>	** 31
			Chromium	8.30	μg/ft <sup>2</sup>	L
			Lead	170.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 0.50	μg/ft <sup>2</sup>	200/40
			Silver			* 420 /0 2
				<del></del>	μg/ft <sup>2</sup>	* 139/9.3
			Arsenic	< 1.30	μg/ft <sup>2</sup>	** 62
440.00	4 of Floor Dool 10 1	Tour of Davit C	Barium	110.00	μg/ft <sup>2</sup>	ļ
110-06	1st Floor Dock at Column C-6	Top of Dry Transformer	Cadmium	2.50	μg/ft²	** 31
			Chromium	15.00	μg/ft²	
			Lead	44.00	μg/ft²	** 200/40
			Selenium	< 2.50	μg/ft²	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limits
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 0.25	μg/ft <sup>2</sup>	** 62
		Maintalla Chain Landina	Barium	32.00	μg/ft <sup>2</sup>	
110-07	Basement at Column H-10	Middle Stair Landing	Cadmium	0.22	μg/ft <sup>2</sup>	** 31
		Floor	Chromium	2.60	μg/ft <sup>2</sup>	
			Lead	33.00	μg/ft²	** 200/40
			Selenium	< 0.50	μg/ft²	
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 0.25	μg/ft²	** 62
	2nd Flore Machanical Bases		Barium	10.00	μg/ft²	
110-08	2nd Floor - Mechanical Room at Column H-14	Top of Dry Transformer	Cadmium	0.09	μg/ft²	** 31
	at Column H-14		Chromium	0.54	μg/ft²	
			Lead	2.40	μg/ft²	** 200/40
			Selenium	< 0.50	μg/ft²	
			Silver	< 0.50	μg/ft <sup>2</sup>	* 139/9.3
	2nd Floor - at Column H-14	Floor (under raised floor)	Arsenic	2.70	μg/ft²	** 62
			Barium	69.00	μg/ft <sup>2</sup>	
110-09			Cadmium	4.00	μg/ft <sup>2</sup>	** 31
			Chromium	39.00	μg/ft <sup>2</sup>	
			Lead	49.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 5.00	μg/ft²	
		Stair Landing - Middle Floor	Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 0.25	μg/ft²	** 62
	Penthouse - Stairwell		Barium	11.00	μg/ft <sup>2</sup>	
110-10			Cadmium	0.11	μg/ft²	** 31
			Chromium	1.10	μg/ft²	
			Lead	4.30	μg/ft²	** 200/40
			Selenium	< 0.50	μg/ft²	
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	1.50	μg/ft²	** 62
			Barium	69.00	μg/ft²	
110-11	Penthouse A - at Column I-3	Top of AHU	Cadmium	0.34	μg/ft²	** 31
			Chromium	22.00	μg/ft²	
			Lead	56.00	μg/ft²	** 200/40
			Selenium	< 2.50	μg/ft²	
			Silver	< 0.50	μg/ft <sup>2</sup>	* 139/9.3
			Arsenic	9.20	μg/ft²	** 62
			Barium	62.00	μg/ft <sup>2</sup>	
110-12	Penthouse A - North End	Floor	Cadmium	1.20	μg/ft <sup>2</sup>	** 31
			Chromium	48.00	μg/ft <sup>2</sup>	
			Lead	200.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 2.50	μg/ft <sup>2</sup>	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limits
			Silver	0.71	μg/ft²	* 139/9.3
			Arsenic	< 1.30	μg/ft²	** 62
		Floor (condense)	Barium	84.00	μg/ft <sup>2</sup>	
110-13	Penthouse B - Center	Floor (under raised	Cadmium	1.40	μg/ft <sup>2</sup>	** 31
		floor)	Chromium	12.00	μg/ft <sup>2</sup>	
			Lead	64.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 2.50	μg/ft²	
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 2.50	μg/ft <sup>2</sup>	** 62
			Barium	34.00	μg/ft <sup>2</sup>	
110-14	Penthouse B - Entrance	Floor	Cadmium	0.26	μg/ft <sup>2</sup>	** 31
			Chromium	3.60	μg/ft <sup>2</sup>	
			Lead	18.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 5.00	μg/ft <sup>2</sup>	
			Silver	< 0.50	μg/ft <sup>2</sup>	* 139/9.3
		Top of AHU 2-2	Arsenic	< 2.50	μg/ft <sup>2</sup>	** 62
	Penthouse B		Barium	21.00	μg/ft <sup>2</sup>	
110-15			Cadmium	0.17	μg/ft <sup>2</sup>	** 31
			Chromium	17.00	μg/ft <sup>2</sup>	
			Lead	17.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 5.00	μg/ft <sup>2</sup>	
			Silver	< 0.50	μg/ft <sup>2</sup>	* 139/9.3
	Penthouse B	Stair Landing	Arsenic	< 0.25	μg/ft <sup>2</sup>	** 62
			Barium	37.00	μg/ft <sup>2</sup>	
110-16			Cadmium	0.12	μg/ft <sup>2</sup>	** 31
			Chromium	2.40	μg/ft <sup>2</sup>	
			Lead	10.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 0.50	μg/ft <sup>2</sup>	
			Silver	1.20	μg/ft <sup>2</sup>	* 139/9.3
			Arsenic	4.80	μg/ft <sup>2</sup>	** 62
			Barium	68.00	μg/ft <sup>2</sup>	
110-17	1st Floor at Column D-15	Floor (under raised	Cadmium	8.40	μg/ft <sup>2</sup>	** 31
		floor)	Chromium	34.00	μg/ft <sup>2</sup>	
			Lead	100.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 2.50	μg/ft <sup>2</sup>	200/10
			Silver	3.20	μg/ft <sup>2</sup>	* 139/9.3
			Arsenic	10.00	μg/ft <sup>2</sup>	** 62
			Barium	60.00	μg/ft <sup>2</sup>	02
110-18	1st Floor at Column F-10	Floor (under raised	Cadmium	9.10	μg/ft <sup>2</sup>	** 31
110 10	100.000.000.000.000.000	floor)	Chromium	70.00	μg/ft <sup>2</sup>	31
			Lead	210.00	μg/ft <sup>2</sup>	** 200/40
			Selenium	< 2.50		200/40
			Selelliulli	· 2.50	μg/ft²	

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limits
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	2.30	μg/ft²	** 62
		Floor (under raised	Barium	150.00	μg/ft²	
110-19	1st Floor at Column B-8	floor)	Cadmium	3.80	μg/ft²	** 31
		11001)	Chromium	36.00	μg/ft²	
			Lead	200.00	μg/ft²	** 200/40
			Selenium	< 2.50	μg/ft²	
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 2.50	μg/ft²	** 62
		Floor (under raised	Barium	170.00	μg/ft²	
110-20	2nd Floor - at Column F-11	floor)	Cadmium	9.10	μg/ft²	** 31
		11001)	Chromium	57.00	μg/ft²	
			Lead	250.00	μg/ft²	** 200/40
			Selenium	< 25.00	μg/ft²	
		- Top of Transformer	Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	3.50	μg/ft²	** 62
	1st Floor Mechanical Room at F-		Barium	270.00	μg/ft²	
110-21	16		Cadmium	4.80	μg/ft²	** 31
	10		Chromium	19.00	μg/ft²	
			Lead	150.00	μg/ft²	** 200/40
			Selenium	< 2.50	μg/ft²	
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	7.30	μg/ft²	** 62
	1st Floor Mechanical Room at F-		Barium	260.00	μg/ft²	
110-22	16	Floor	Cadmium	3.10	μg/ft²	** 31
	10		Chromium	15.00	μg/ft²	
			Lead	140.00	μg/ft²	** 200/40
			Selenium	< 2.50	μg/ft²	
			Silver	< 0.50	μg/ft²	* 139/9.3
			Arsenic	< 0.25	μg/ft²	** 62
			Barium	1.00	μg/ft²	
110-23	Field Blank		Cadmium	< 0.05	μg/ft²	** 31
			Chromium	< 0.50	μg/ft²	
			Lead	< 0.25	μg/ft²	** 200/40
			Selenium	< 0.50	μg/ft²	

<sup>\*</sup> Recommended Limits based on Table 3 (BNL Surface Wipe Criteria for Metals) of the Brookhaven Surface Wipe Sampling Procedure (IH75190), Rev 19: 3/4/14

<sup>\*\*</sup> Recommended Limits based on Attachment 9.3 (Required & Recommended Surface Wipe Criteria) - Brookhaven Surface Wipe Sampling Procedure (IH75190), Rev 23: 6/23/17 Indicates results at or above REL

# Appendix B

Laboratory Analytical Reports





NIOSH 7300/EPA SW-846 3050B

Client: Occu-Tec, Inc.

100 NW Business Park Ln.

Riverside, MO 64150 Project: 918004.002 Building 110 Attn: Justin Arnold

Lab Order ID:

51824383

Date Received:
Date Reported:

09/20/2018

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10/05/2018

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Sample ID	Description	Area		Reporting	Concentration	Concentration														
Lab Sample ID	Lab Notes	(ft <sup>2</sup> )	*Element	Limit (μg)	(µg)	(μg/ft <sup>2</sup> )														
			Ag	0.50	< 0.50	< 0.50														
			As*	2.5	< 2.5	< 2.5														
110-01	Basement Floor Column H 16		Ba	1.0	79	79														
		1	Cd	0.050	4.1	4.1														
			Cr	5.0	33	33														
51824383IPW_1			Pb	25	2700	2700														
318243831F W_1			Se*	10.	< 10.	< 10.														
	Basement Stair Landing P 15			Ag	0.50	< 0.50	< 0.50													
				As	0.25	< 0.25	< 0.25													
110-02							Ba	1.0	36	36										
				1	Cd	0.050	0.44	0.44												
			Cr	0.50	8.0	8.0														
51824383IPW_2												ı					Pb	5.0	140	140
318243831FW_2			Se	0.50	< 0.50	< 0.50														
			Ag	0.50	< 0.50	< 0.50														
	Mechanical		As*	2.5	< 2.5	< 2.5														
110-03	Room BSMT A-11 Top of		Ba	1.0	32	32														
	Compressor	1	Cd	0.050	5.6	5.6														
			Cr	5.0	30.	30.														
51824383IPW_3			Pb	5.0	160	160														
316243831FW_3			Se*	10.	< 10.	< 10.														

<sup>\*</sup>As – elevated RL possibly due to high levels of Pd interference

Melissa Ferrell

Analyst

Lab Director

<sup>\*</sup>Se - elevated RL possibly due to high levels of Al interference

<sup>\*</sup> SAI is AIHA ELLAP accredited for Pb only for dust wipe metals.





NIOSH 7300/EPA SW-846 3050B

Client: Occu-Tec, Inc.

100 NW Business Park Ln.

Riverside, MO 64150

**Project:** 918004.002 Building 110

Attn: Justin Arnold

Lab Order ID:

51824383

Date Received:
Date Reported:

09/20/2018 10/05/2018

Page:

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Sample ID	Description	Area		Reporting	Concentration	Concentration				
Lab Sample ID	Lab Notes	(ft <sup>2</sup> )	*Element	Limit (µg)	(µg)	(μg/ft²)				
			Ag	0.50	4.6	4.6				
			As*	2.5	< 2.5	< 2.5				
110-04	Basement Floor B 5		Ba	2.5	160	160				
		1	Cd	0.050	6.2	6.2				
			Cr	5.0	37	37				
51824383IPW_4			Pb	13	900	900				
3102430311 W_4			Se*	5.0	< 5.0	< 5.0				
	BSMT Stair Landing G 2						Ag	0.50	0.63	0.63
			As*	1.3	< 1.3	< 1.3				
110-05					Ba	1.0	64	64		
				1	Cd	0.050	0.60	0.60		
			Cr	0.50	8.3	8.3				
51824383IPW_5			Pb	5.0	170	170				
31024303H W_3			Se	0.50	< 0.50	< 0.50				
			Ag	0.50	< 0.50	< 0.50				
	1st Floor Dock		As*	1.3	< 1.3	< 1.3				
110-06	Dry Transformer C		Ba	2.5	110	110				
	6	1	Cd	0.050	2.5	2.5				
			Cr	2.5	15	15				
51824383IPW_6			Pb	1.3	44	44				
5102 <del>4</del> 5051F W_0			Se*	2.5	< 2.5	< 2.5				

<sup>\*</sup>As – elevated RL possibly due to high levels of Pd interference

Melissa Ferrell

Analyst

Lab Director

<sup>\*</sup>Se – elevated RL possibly due to high levels of Al interference

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NIOSH 7300/EPA SW-846 3050B

Client: Occu-Tec, Inc. Attn: Justin Arnold Lab Order ID: 51824383

 100 NW Business Park Ln.
 Date Received:
 09/20/2018

 Riverside, MO 64150
 Date Reported:
 10/05/2018

 Project:
 918004.002 Building 110
 Page:
 3 of 8

Sample ID	Description	Area		Reporting	Concentration	Concentration			
Lab Sample ID	Lab Notes	(ft <sup>2</sup> )	*Element	Limit (µg)	(µg)	(μg/ft²)			
			Ag	0.50	< 0.50	< 0.50			
	BSMT Stair		As	0.25	< 0.25	< 0.25			
110-07	Landing Middle		Ba	0.50	32	32			
	H 10 Floor	1	Cd	0.050	0.22	0.22			
			Cr	0.50	2.6	2.6			
51824383IPW_7			Pb	0.25	33	33			
318243831F W_/			Se	0.50	< 0.50	< 0.50			
	2 <sup>nd</sup> Floor Mech Rm H 14 Dry Transformer		Ag	0.50	< 0.50	< 0.50			
		Rm H 14 Dry	Rm H 14 Dry		As	0.25	< 0.25	< 0.25	
110-08					Ва	0.050	10.	10.	
				Transformer	Transformer	Transformer	Transformer	1	Cd
			Cr	0.50	0.54	0.54			
51824383IPW_8			Pb	0.25	2.4	2.4			
318243831PW_8			Se	0.50	< 0.50	< 0.50			
			Ag	0.50	< 0.50	< 0.50			
	2 <sup>nd</sup> Floor Under		As*	2.5	2.7	2.7			
110-09	Raised Floor H		Ba	1.0	69	69			
	14	1	Cd	0.050	4.0	4.0			
			Cr	5.0	39	39			
51824383IPW_9			Pb	2.5	49	49			
310243031FW_9			Se*	5.0	< 5.0	< 5.0			

<sup>\*</sup>As - elevated RL possibly due to high levels of Pd interference

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NIOSH 7300/EPA SW-846 3050B

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Riverside, MO 64150 Project: 918004.002 Building 110 Attn: Justin Arnold

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51824383

Date Received: Date Reported: 09/20/2018 10/05/2018

Page:

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Sample ID	Description	Area		Reporting	Concentration	Concentration		
Lab Sample ID	Lab Notes	(ft <sup>2</sup> )	*Element	Limit (µg)	(µg)	(μg/ft <sup>2</sup> )		
			Ag	0.50	< 0.50	< 0.50		
	Penthouse		As	0.25	< 0.25	< 0.25		
110-10	Stairs Landing		Ba	0.25	11	11		
	Middle Floor	1	Cd	0.050	0.11	0.11		
			Cr	0.50	1.1	1.1		
51824383IPW_10			Pb	0.25	4.3	4.3		
316243631FW_10			Se	0.50	< 0.50	< 0.50		
			Ag	0.50	< 0.50	< 0.50		
	Penthouse A Top of AHU 1- 3		As*	1.3	1.5	1.5		
110-11		Top of AHU 1-		Ba	1.0	69	69	
			3	3	1	Cd	0.050	0.34
			Cr	2.5	22	22		
51024202IDW 11			Pb	1.3	56	56		
51824383IPW_11			Se*	2.5	< 2.5	< 2.5		
			Ag	0.50	< 0.50	< 0.50		
			As*	2.5	9.2	9.2		
110-12	Penthouse A Floor N End		Ba	1.0	62	62		
	21001112110	1	Cd	0.050	1.2	1.2		
			Cr	10.	48	48		
51024202IDW 12			Pb	5.0	200	200		
51824383IPW_12			Se*	2.5	< 2.5	< 2.5		

Melissa Ferrell

Analyst

Lab Director

<sup>\*</sup> SAI is AIHA ELLAP accredited for Pb only for dust wipe metals.





NIOSH 7300/EPA SW-846 3050B

Client: Occu-Tec, Inc. Attn: Justin Arnold Lab Order ID: 51824383

 100 NW Business Park Ln.
 Date Received:
 09/20/2018

 Riverside, MO 64150
 Date Reported:
 10/05/2018

 Project:
 918004.002 Building 110
 Page:
 5 of 8

Reporting Sample ID **Description** Concentration Concentration Area \*Element Limit  $(ft^2)$  $(\mu g/ft^2)$ Lab Sample ID Lab Notes  $(\mu g)$  $(\mu g)$ Ag 0.50 0.71 0.71 As\* 1.3 < 1.3 < 1.3 Penthouse B 110-13 Raised Floor. Ba 2.5 84 84 Center Floor 1 Cd 0.050 1.4 1.4 Cr 0.50 12 12 Pb 2.5 64 64 51824383IPW\_13 Se\* 2.5 < 2.5 < 2.5 0.50 < 0.50 < 0.50 Ag As\* 2.5 < 2.5 < 2.5 Penthouse B 110-14 0.50 Ba 34 34 Entrance Floor Cd 0.050 0.26 0.26 Cr 0.50 3.6 3.6 0.25 Pb 18 18 51824383IPW\_14 < 5.0 Se\* 5.0 < 5.0 0.50 < 0.50 < 0.50 Ag As\* 2.5 < 2.5 < 2.5 Penthouse B 110-15 0.50 21 21 Ba AHU 2-2 Top 1 Cd 0.050 0.17 0.17 Cr 5.0 17 17 Pb 0.25 17 17 51824383IPW\_15 Se\* 5.0 < 5.0 < 5.0

Melissa Ferrell

Analyst

Lab Director

<sup>\*</sup>As – elevated RL possibly due to high levels of Pd interference

<sup>\*</sup>Se - elevated RL possibly due to high levels of Al interference

<sup>\*</sup> SAI is AIHA ELLAP accredited for Pb only for dust wipe metals.





#### NIOSH 7300/EPA SW-846 3050B

Client: Occu-Tec, Inc.

100 NW Business Park Ln.

Riverside, MO 64150

**Project:** 918004.002 Building 110

Attn: Justin Arnold

Lab Order ID:

51824383

Date Received:
Date Reported:

09/20/2018 10/05/2018

Page

6 of 8

Page: 6 o	I	•

Sample ID	Description	Area		Reporting	Concentration	Concentration					
Lab Sample ID	Lab Notes	(ft <sup>2</sup> )	*Element	Limit (μg)	(µg)	(μg/ft²)					
			Ag	0.50	< 0.50	< 0.50					
			As	0.25	< 0.25	< 0.25					
110-16	Penthouse B Stair Landing		Ba	1.0	37	37					
		1	Cd	0.050	0.12	0.12					
			Cr	0.50	2.4	2.4					
51824383IPW_16			Pb	0.25	10.	10.					
318243831F W_10			Se	0.50	< 0.50	< 0.50					
	1 <sup>st</sup> Floor Under Raised Floor D 15		Ag	0.50	1.2	1.2					
			As*	1.3	4.8	4.8					
110-17			Ва	2.5	68	68					
		15	15	15	15	15	1	Cd	0.25	8.4	8.4
			Cr	2.5	34	34					
51824383IPW_17			Pb	13	100	100					
316243631FW_1/			Se*	2.5	< 2.5	< 2.5					
			Ag	0.50	3.2	3.2					
	1 <sup>st</sup> Floor Under		As*	2.5	10.	10.					
110-18	Raised Floor F		Ba	2.5	60.	60.					
	10	1	Cd	0.25	9.1	9.1					
			Cr	5.0	70.	70.					
5103/2021DW 10			Pb	2.5	210	210					
51824383IPW_18			Se*	2.5	< 2.5	< 2.5					

<sup>\*</sup>As – elevated RL possibly due to high levels of Pd interference

Melissa Ferrell

Analyst

Lab Director

<sup>\*</sup>Se – elevated RL possibly due to high levels of Al interference

<sup>\*</sup> SAI is AIHA ELLAP accredited for Pb only for dust wipe metals.





**Date Received:** 

51824383

09/20/2018

NIOSH 7300/EPA SW-846 3050B

Client: Occu-Tec, Inc. Attn: Justin Arnold Lab Order ID:

100 NW Business Park Ln. Riverside, MO 64150

Riverside, MO 64150 Date Reported: 10/05/2018
Project: 918004.002 Building 110 Page: 7 of 8

Sample ID	Description	Area Reporting		Concentration	Concentration		
Lab Sample ID	Lab Notes	(ft <sup>2</sup> )	*Element	Limit (µg)	(µg)	(μg/ft <sup>2</sup> )	
	1st Floor Under		Ag	0.50	< 0.50	< 0.50	
			As*	1.3	2.3	2.3	
110-19	Raised Floor B		Ba	2.5	150	150	
	8	1	Cd	0.050	3.8	3.8	
			Cr	2.5	36	36	
51024202IDW 10			Pb	2.5	200	200	
51824383IPW_19			Se*	2.5	< 2.5	< 2.5	
	2 <sup>nd</sup> Floor Under Raised Floor F 11		Ag	0.50	< 0.50	< 0.50	
		1	As*	2.5	< 2.5	< 2.5	
110-20			Ba	2.5	170	170	
			Cd	0.25	9.1	9.1	
			Cr	5.0	57	57	
51824383IPW_20			Pb	5.0	250	250	
			Se*	25	< 25	< 25	
	1 <sup>st</sup> Floor Mechanical Area F 16 Transformer	1	Ag	0.50	< 0.50	< 0.50	
			As*	1.3	3.5	3.5	
110-21			Ba	5.0	270	270	
			Cd	0.050	4.8	4.8	
			Cr	2.5	19	19	
51024202IDW 21			Pb	2.5	150	150	
51824383IPW_21			Se*	2.5	< 2.5	< 2.5	

<sup>\*</sup>As - elevated RL possibly due to high levels of Pd interference

Melissa Ferrell

Analyst

Lab Director

<sup>\*</sup>Se - elevated RL possibly due to high levels of Al interference

<sup>\*</sup> SAI is AIHA ELLAP accredited for Pb only for dust wipe metals.





NIOSH 7300/EPA SW-846 3050B

**Client:** Occu-Tec, Inc. Attn: **Justin Arnold** Lab Order ID: 51824383

100 NW Business Park Ln. **Date Received:** 09/20/2018 Riverside, MO 64150 **Date Reported:** 10/05/2018

918004.002 Building 110 Page: **Project:** 8 of 8

Sample ID	Description	Area		Reporting	Concentration	Concentration	
Lab Sample ID	Lab Notes	(ft <sup>2</sup> )	*Element	Limit (µg)	Concentration (μg)	Concentration (μg/ft²)	
110-22	1 <sup>st</sup> Floor Mechanical Area Floor F 16	1	Ag	0.50	< 0.50	< 0.50	
			As*	2.5	7.3	7.3	
			Ba	5.0	260	260	
			Cd	0.050	3.1	3.1	
			Cr	2.5	15	15	
51824383IPW_22			Pb	2.5	140	140	
			Se*	2.5	< 2.5	< 2.5	
			Ag	0.50	< 0.50	-	
110-23	BLANK	-	As	0.25	< 0.25	-	
			Ba	0.050	1.0	-	
			Cd	0.050	< 0.050	-	
			Cr	0.50	< 0.50	-	
51824383IPW_23			Pb	0.25	< 0.25	-	
316243631FW_23			Se	0.50	< 0.50	-	

<sup>\*</sup>As - elevated RL possibly due to high levels of Pd interference

(b) (6) Melissa Ferrell Analyst **Lab Director** 

<sup>\*</sup>Se - elevated RL possibly due to high levels of Al interference

<sup>\*</sup> SAI is AIHA ELLAP accredited for Pb only for dust wipe metals.



Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 Phone: 336.292.3888 Fax: 336.292.3313

Lab Use Only Lab Order ID: 51874383
Lab Order ID: Oly / 108
Client Code:

Company Cottact Information   Company OCCU-TEC Inc.   Contact: Justin Arnold   Silice an Apis Quarter (XT2)*   With Respinible Day (XDC).   Silice an Apis Quarter (XDC).   Silice an Apis Qua	www.sailab.com	lab@sailab.c	om —		
Company: OCCU-TEC INC.  Address: 100 NW Business Park Lane    Phone   816-810-3276   Silica as Cincibilate (150)   Wish Respirable Data (150)   Wish Respirable D	Company Contact Information			Industrial Hygiene Test Ty	pes
Address: 100 NW Business Park Lane   Phone   816-810-3276   Suite as Criticollus (XSC)   With Respirable Data (XSC)   With Respirable Data (XSC)   With Respirable Data (XSC)   Suite as Apita Quartz. Cristobality, Tollymine (XSA)   Suite as Cristobality, Tollymine (XSA)   Suite as Apita Quartz. Cristobality, Tollymine (XSA)   Suite as Apita Quartz. Cristobality, Tollymine (XSA)   Suite as Cristobality, Tollymine (XS	Company: OCCU-TEC Inc.	Contact: Justin Arn	nold		z) []
Riverside, Mo 64150  Fax   816-994-3478   Email   jarnold@occutec.com   Silica as Tridgmile (2877)   Silica as Apple (2878)   Silica as Apple (287	Address: 100 NW Business Park Lane	Phone □:816-810	-3276	Silica as Cristobalite (XSC)*	
Email   jarnold@occutec.com   Silica as Alpho Quart, Cristoblate, Prolymore (NSA)*   Silica as Alpho Quart, Cristoblate, Prolymore (NSA)*   With Respirable Data (NDA)   Silica as Alpho Quart, Cristoblate, Prolymore (NSA)*   Silic		700 10 10 10		Silica as Tridymite (XST)*	
Billing/Invoice Information  Turn Around Times  SAME 90 Min. 48 Hours 5  Same 190 Min. 48 Hours 1  3 Hours 72 Hours 1  Address: 12 Hours 12 Hours 1  The Address: 12 Hours 12 Hours 1  The Address: 12 Hours 144 Hours 1  The Address: 144 Hours 1  The Address: 154 Hours 144 Hours 1  The Address: 154 Hours 144 Hours 1  The Address: 154 Hours 144 Hours 1  The Address: 164 Hours 144 Hours 1	Triverside, ivie of ree				
Billing/Invoice Information  Turn Around Times    90 Min.		Eman .jarrioid@cc	cutec.com	According to the second	A) [
SAME  90 Min.  48 Hours	Billing/Invoice Information	Turn Around	Times		
Company:  Contact:  6 Hours		<del></del>		Bulk Phase ID/Whole Rock (XUK)	
Contact:    6 Hours   96 Hours   Respirable Dast Method 6600 (GRD)   CM MOSH 7400 A Rules (PCM)   CM MO	Company:	3 Hours	Hours 🔲		
Address:    12 Hours       120 Hours	Contact:	6 Hours	Hours 🗌	Respirable Dust	
TATS not available for certain test types  Project Name/Number: 918004.002 Building 110  Sample ID # Description/Location Volume/Area Comments  Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Relinquished by  Date/Time  Received by  Date/Time  Page  Accepted	Address:	12 Hours	0 Hours 🔲	PCM NIOSH 7400-A Rules (PCM)	
Project Name/Number: 918004.002 Building 110  Sample ID # Description/Location Volume/Area Comments    Description   Description		24 Hours	4 <sup>+</sup> Hours ■	B Rules (PCB) TWA (PTA)	
Project Name/Number: 918004.002 Building [10]  Sample ID # Description/Location Volume/Area Comments  10 - 01 Busement Floor Column H [4 1 5F Ag. As. Ba. Cd. Cr. Pb. S. Total # of Samples Bellinquished by Date/Time Received by Date/Time Page B. Lof The Ag. As. Ba. Cd. Cr. Pb. S. Total # of Samples Bellinquished by Date/Time Page B. Lof The Ag. Ba. Cd. Cr. Pb. S. Total # of Samples Bellinquished by Date/Time Page B. Lof The Ag. Ba. Cd. Cr. Pb. S. Ag. Ba. Cd. Cr. Pb. S. Total # of Samples Bellinquished by Date/Sime Page B. Lof The Ag. Ba. Cd. Cr. Pb. S. Ag. Ba. Cd. Cr. Pb.		TATs not available for ce	rtain test types		
Sample ID# Description/Location Volume/Area Comments    D - O	PO Number:			(Note if from spray paint operations)	
Sample ID #  Description/Location  Volume/Area  Comments  Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Relinquished by  Date/Time  Page 1: of Z  As-Asis Exp. 244  Page 1: of Z  As-Asis Exp. 244  As-Asis Exp.	Project Name/Number:918004.002 Buildia	2110			
Sample ID # Description/Location Volume/Area Comments  10-01 Basement Floor Column H 14 15 Ag, As, Ba, Cd, Cr, Pb, S  10-02 Pasement Stair landin P 15 SF Ag, As, Ba, Cd, Cr, Pb, S  10-03 Mechanical Room Bom A-11 tog of Compressor SF Ag, As, Ba, Cd, Cr, Pb, S  10-04 Basement Floor Box Bom A-11 tog of Compressor SF Ag, As, Ba, Cd, Cr, Pb, S  10-05 Bom Stair Carding C Z Ag, As, Ba, Cd, Cr, Pb, S  10-06 Power Dock Dry transformer (1 SF Ag, As, Ba, Cd, Cr, Pb, S  10-07 Bom Stair landing Midle H 10 Ploor SF Ag, As, Ba, Cd, Cr, Pb, S  10-09 2nd floor Under Raised Floor H14 I SF Ag, As, Ba, Cd, Cr, Pb, S  10-10 Peathouse Stairs landing Midle Floor SF Ag, As, Ba, Cd, Cr, Pb, S  10-12 Peathouse Stairs landing Midle Floor SF Ag, As, Ba, Cd, Cr, Pb, S  10-13 Peathouse A Top of AHU 01-3 SF Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Relinquished by Date/Time  Received by Date/Time  Page 1-10-18  Page 1-10-18  Page 1-10-18		J		Other 6010 C	X
Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Relinquished by  Date/Time  Received by  Page  1 Of Z  Accopted				* Modified NIOSH 7500/OSHA ID +	12
Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Page 10 of 2  Accepted	Sample ID # Description/I	Location	Volume/Are	ea   Comments	
Ag. As. Ba. Cd. Cr. Pb. S  Ag. As. Ba. Cd. Cr. P	10-01 Basement Floor Colo	ion H 66	1 SF	Ag, As, Ba, Cd, Cr, Pt	o, Se
Ag, As, Ba, Cd, Cr, Pb, S    O - OS   Brtt Stair Landing C Z   Stans Ba, Cd, Cr, Pb, S    O - OG   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS   Brut Stair Landing Middle H 10 Plant   Stans Ba, Cd, Cr, Pb, S    O - OS	10-02 Bosconent Stair landin	P15	ISF	Ag, As, Ba, Cd, Cr,∙Pt	o, Se
Ag, As, Ba, Cd, Cr, Pb, S    10-06   Char Dock Dry transforms (	10-03 Mechanical Room BSMT 1	7-11 top of Compression	158	Ag, As, Ba, Cd, Cr, Pt	o, Se
Ag, As, Ba, Cd, Cr, Pb, S  Ag, As, Ba, Cd, Cr, P	110-04 Basement flour B.S		150	Ag, As, Ba, Cd, Cr, Pt	o, Se
Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Received by  Page 1 of Z  Accopted  Page 1 of Z  Accopted	110-05 BENT Stair Cardina	GZ	151	Ag, As, Ba, Cd, Cr, Pt	o, Se
Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Received by  Page 1-1 of Z  Accopted  Page 1-1 of Z  Accopted	110-06 1 Phor Dock Dry Fra	usformer Cle	15	Ag, As, Ba, Cd, Cr, Pt	o, Se
Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Received by  Page 1 of 2  Accopted  Page 1 of 2	110-07 BSMT Stair landing Mid	De HIO Close	15	Ag, As, Ba, Cd, Cr, Pt	o, Se
Ag, As, Ba, Cd, Cr, Pb, S    O - O	10-68 200 Clase Mach RM H 14	On transformer	181	Ag, As, Ba, Cd, Cr, Pt	o, Se
Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Received by  Page 1 of 2  Accepted  Page 1 of 2  Accepted	10-09 2nd floor Under Raised	floor H14	15/	Ag, As, Ba, Cd, Cr, Pt	o, Se
Relinquished by  Date/Time  Page 1 of 2  Page 1 of 2  Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Page 1 of 2  Accepted	10-10 Penthouse Stairs Landi	in Middle floor	156	Ag, As, Ba, Cd, Cr, Pt	o, Se
Relinquished by  Date/Time  Received by  Page 1 of Z  Ag, As, Ba, Cd, Cr, Pb, S  Total # of Samples  Page 1 of Z  Accepted	10-11 Perthouse A Top of AH	14 01-3	154	Ag, As, Ba, Cd, Cr, Pt	o, Se
Relinquished by  Date/Time  Received by  Date/Time  Page 1 of 2  Accepted	10-12 Peatleyse A Pair NF	Encl		Ag, As, Ba, Cd, Cr, Pt	), Se
Relinquished by Date/Time Received by Date/Time  9-19-18  (b) (6)  Page 1 of Z  AF-918 EXP. 244	10-13 Restloye B Raised Al	our, cuter floor	ISF	Ag, As, Ba, Cd, Cr, Pt	o, Se
(b) (6)  9-19-18 (b) (6)  Page 1 of 2  AF-018 EXP. 244		,		Total # of Samples _	<u> </u>
Accepted Page 1 of Z		e/Time	Received by	Date/Tir	me
Accepted Page 1 of 2	(b) (6) 9-19	-18 (b) (6)			
A-F-918 FXP- 2/4/			1	-20 IN13	UK
Rejected	Accepted				2
	Rejected			A-F-918 EX	P: 2/4/2021



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	5	10011	202
Lab Order ID:	0	06	000
Client Code: _			

Sample ID #	Description/Location	Volume/Area	Comments
110-014	011 0 0000 0 01	156	Ag, As, Ba, Cd, Cr, Pb, Se
110-615	211 6 211	156	Ag, As, Ba, Cd, Cr, Pb, Se
110 010	0 1 0 51 1 1	INF	Ag, As, Ba, Cd, Cr, Pb, Se
110-017	16t Classia De Cardia	12/2	Ag, As, Ba, Cd, Cr. Pb, Se
110-014	15t A - 11 kg P : 1 Ch 515	155	Ag, As, Ba, Cd, Cr, Pb, Se
110-010	191 Flour Under Raised Floor B8	P	Ag, As, Ba, Cd, Cr, Pb, Se
10 470	2" Apor Under Raised Hope FII	107	Ag, As, Ba, Cd, Cr, Pb, Se
110-421	CC CI	13'	Ag, As, Ba, Cd, Cr, Pb, Se
10-22	ich al	13	Ag, As, Ba, Cd, Cr, Pb, Se
110-23	A HOOF MENTALES HELD HOOF 1 19	N	Ag, As, Ba, Cd, Cr, Pb, Se
110-65	BLANK	10.15	Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
	<del> </del>		
			Ag, As, Ba, Cd, Cr, Pb, Se Ag, As, Ba, Cd, Cr, Pb, Se
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			Ag, As, Ba, Cd, Cr, Pb, Se
-	· · · · · · · · · · · · · · · · · · ·		Ag, As, Ba, Cd, Cr, Ph. Se
		-	Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
<u> </u>			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
	_		Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
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	-		Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
		-	Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba, Cd, Cr, Pb, Se
			Ag, As, Ba. Cd, Cr, Pesp,e

# Appendix C Qualifications and Licenses

# STATE OF MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES

# **LEAD OCCUPATION LICENSE REGISTRATION**

Issued to:

# Justin E. Arnold

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

6/11/2018 Issuance Date: 6/11/2020 **Expiration Date:** 

120611-300003622 License Number:





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

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