



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

January 14, 2020

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 #141C
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 metals in settled dust sampling investigation of Building #141C 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 December 6, 2019, 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 tenant-occupied areas within the building. The purpose of this testing was to further characterize the presence and concentration of target metals in common tenant-occupied areas of the building.

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 only within tenant-occupied areas.

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 by building occupants. A representative surface area of approximately one square foot (1 SF) was measured and delineated with pre-fabricated, disposable templates. The dust wipe samples were collected using dedicated dust wipe cloths meeting ASTM standards. Each [REDACTED] was individually wrapped. Each sample was collected by [REDACTED] in a north "S" pattern over a measured sampling area. Then, the wipe [REDACTED] 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 the sample contained concentrations of target metals above laboratory detection limits. The following table identifies the results for each of the seven metals that were analyzed. **Samples with a "<" sign indicate that the results were below the reportable limit.**

Analysis	Concentration ($\mu\text{g}/\text{sq. ft.}$)
Silver	<0.50
Arsenic	<0.50
Barium	53
Cadmium	1.2
Lead	16
Selenium	<1.3

All of the samples collected contained measurable levels of target metals. However, no concentrations exceeded the recommended exposure limits (RELs) above the regulatory or Brookhaven recommended levels.

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
Environmental Scientist



(b) (6)

Kevin Heriford
Environmental Operations Manager (QA/QC)

Appendices:

- A - Sample Summary Table
- B - Laboratory Analysis Reports
- C - Licenses

Appendix

A

Sample Summary Table

Goodfellow Federal Center - Building # 141C - Wipe Sample Data

Sample Number	Location	Area Description	Analyte	Result	Units	Recommended Limits
122019-MetW-141C-01	Field Blank	N/A	Silver	< 0.50	ft ²	* 139/9.3
			Arsenic	< 0.50	ft ²	** 62
			Barium	< 0.75	ft ²	
			Cadmium	< 0.05	ft ²	** 31
			Lead	< 0.25	ft ²	** 200/40
			Selenium	< 1.30	ft ²	
122019-MetW-141C-02	Floor	Northeast Wall	Silver	< 0.50	µg/ft ²	* 139/9.3
			Arsenic	< 0.50	µg/ft ²	** 62
			Barium	53.00	µg/ft ²	
			Cadmium	1.20	µg/ft ²	** 31
			Lead	16.00	µg/ft ²	** 200/40
			Selenium	< 1.30	µg/ft ²	

* 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

** 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



Dust Wipe Metals Concentration by Inductively-Coupled Plasma Analysis (ICP)

NIOSH 7300/EPA SW-846 3050B



Client: OCCU-TEC Inc. 2604 NE Industrial Drive, Suite 230 North Kansas City, MO 64117	Attn: Justin Arnold	Lab Order ID: 71931195 Date Received: 12/12/2019 Date Reported: 12/20/2019
Project: 919103		Page: 1 of 1

Sample ID	Description	Area (ft ²)	*Element	Reporting Limit (µg)	Concentration (µg)	Concentration (µg/ft ²)
Lab Sample ID	Lab Notes					
122019-MetW-141C-01 71931195IPW_1	Field Blank	-	Ag	0.50	< 0.50	--
			As	0.50	< 0.50	--
			Ba	0.75	< 0.75	--
			Cd	0.050	< 0.050	--
			Pb	0.25	< 0.25	--
			Se	1.3	< 1.3	--
122019-MetW-141C-02 71931195IPW_2	Inside 141C	1	Ag	0.50	< 0.50	< 0.50
			As	0.50	< 0.50	< 0.50
			Ba	15	53	53
			Cd	0.050	1.2	1.2
			Pb	0.25	16	16
			Se	1.3	< 1.3	< 1.3

Melissa Ferrell

Analyst

(b) (6)

Lab Director

* SAI is AIHA ELLAP accredited for Pb only for dust wipe metals.

Unless otherwise noted blank sample correction was not performed on analytical results. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. MDLs are available upon request. Time-weighted average (TWA) calculations are based on customer supplied data and valid only for samples included in the specified TWA group. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173190.



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: 71931195

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)	<input checked="" type="checkbox"/>
Other _____	☐

* Modified NIOSH 7500/OSHA ID 142

Billing/Invoice Information	Turn Around Times [^]	
SAME <input checked="" type="checkbox"/>	90 Min. ☐	48 Hours ☐
Company:	3 Hours ☐	72 Hours ☐
Contact:	6 Hours ☐	96 Hours ☐
Address:	12 Hours ☐	120 Hours <input checked="" type="checkbox"/>
	24 Hours ☐	144 ⁺ Hours ☐
[^] TATs not available for certain test types		
PO Number:		
Project Name/Number: 919103		

Sample ID #	Description/Location	Volume/Area	Comments
122019-MetW-141C-01	Field Blank	N/A	Ag, As, Ba, Cd, Pb, Se
122019-MetW-141C-02	Inside 141C	1 sf	Ag, As, Ba, Cd, Pb, Se
122019-MetW-141C-03			Ag, As, Ba, Cd, Pb, Se
122019-MetW-141C-04			Ag, As, Ba, Cd, Pb, Se

Total # of Samples 2

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

Accepted Rejected

Page 1 of 1

A-F-018 EXP: 2/4/2021

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

Issuance Date: **6/11/2018**
Expiration Date: **6/11/2020**
License Number: **120611-300003622**



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

**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



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 and Voice dial: 711

Randall W. Williams, MD, FACOG
Director



Michael L. Parson
Governor

CONFIDENTIAL

December 10, 2018

Austin O'Byrne
OCCU-TEC
100 Northwest Business Park Lane
Riverside, MO 64150

Dear Mr. O'Byrne:

This letter concerns your recent application for a lead occupation license with the Missouri Department of Health and Senior Services' Lead Licensing Program. You scored **98%** on the state exam, therefore your application for a Lead Risk Assessor license is now complete.

Enclosed please find your Lead Risk Assessor license certificate and photo identification badge. If you intend to perform any regulated lead-bearing substance activities, you must be employed by a Missouri licensed lead abatement contractor. 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 notice will be mailed to you approximately four months prior to the expiration date, and your renewal application will need to be completed and submitted 60 days prior to the expiration date.

A requirement of renewing your license will be attending a Lead Risk Assessor refresher class. A list of Missouri certified lead abatement training providers will be included with your renewal notice. Additional information on training and lead abatement in general is located at <http://health.mo.gov/safety/leadlicensing/index.php>.

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

Sincerely,

(b) (6)

Angie DeBroeck
Lead Licensing Program

AKD:tp

Enclosures

www.health.mo.gov

Healthy Missourians for life.

The Missouri Department of Health and Senior Services will be the leader in promoting, protecting and partnering for health.

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER: Services provided on a nondiscriminatory basis.



AIHA Laboratory Accreditation Programs, LLC

acknowledges that

Scientific Analytical Institute, Inc.

4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: 173190

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

- | | |
|--------------------------------------|--|
| ✓ INDUSTRIAL HYGIENE | Accreditation Expires: November 01, 2020 |
| ✓ ENVIRONMENTAL LEAD | Accreditation Expires: November 01, 2020 |
| ✓ ENVIRONMENTAL MICROBIOLOGY | Accreditation Expires: November 01, 2020 |
| <input type="checkbox"/> FOOD | Accreditation Expires: |
| ✓ UNIQUE SCOPES | Accreditation Expires: November 01, 2020 |

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

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Elizabeth Bair
Chairperson, Analytical Accreditation Board

Revision 17 – 09/11/2018

(b) (6)

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Date Issued: 10/31/2018



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

Scientific Analytical Institute, Inc.
4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: **173190**
Issue Date: 10/31/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 03/01/2007

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/ Title of In-house Method	Method Description or Analyte <i>(for internal methods only)</i>
Chromatography Core	Ion Chromatography (IC)		NIOSH 7600	
			OSHA ID-215 v2	
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009	
		FAA	OSHA ID-140	
	Inductively-Coupled Plasma	ICP/AES	NIOSH 7082	
	X-ray Diffraction (XRD)		NIOSH 7300	
Asbestos/Fiber Microscopy Core	Polarized Light Microscopy (PLM)		EPA 600/R-93/116	
	Phase Contrast Microscopy (PCM)		NIOSH 7400	
	Transmission Electron Microscopy (TEM)		40 CFR Part 763 Subpart E Appendix A	
			AHERA	
Miscellaneous Core	Gravimetric		NIOSH 7402	
			NIOSH 0500	
			NIOSH 0600	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

Scientific Analytical Institute, Inc.

4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: **173190**

Issue Date: 10/31/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

The EPA recognizes the AIHA-LAP, LLC ELLAP program as meeting the requirements of the National Lead Laboratory Accreditation Program (NLLAP) established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air and composited wipes analyses are not included as part of the NLLAP.

Environmental Lead Laboratory Accreditation Program (ELLAP)

Initial Accreditation Date: 03/01/2007

Field of Testing (FoT)	Technology sub-type/ Detector	Method	Method Description <i>(for internal methods only)</i>
Paint		EPA SW-846 3050B	
		EPA SW-846 6010C	
		EPA SW-846 7000B	
Soil		EPA SW-846 3050B	
		EPA SW-846 6010C	
		EPA SW-846 7000B	
Settled Dust by Wipe		EPA SW-846 3050B	
		EPA SW-846 6010C	
		EPA SW-846 7000B	
Airborne Dust		NIOSH 7082	

A complete listing of currently accredited Environmental Lead laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

Scientific Analytical Institute, Inc.
4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: **173190**
Issue Date: 10/31/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Environmental Microbiology Laboratory Accreditation Program (EMLAP)

Initial Accreditation Date: 04/01/2006

EMLAP Category	Field of Testing (FoT)	Method	Method Description <i>(for internal methods only)</i>
Fungal	Air - Culturable	B-SOP-007	Analysis of Viable Environmental Organisms
	Bulk - Culturable	B-SOP-007	Analysis of Viable Environmental Organisms
	Surface - Culturable	B-SOP-007	Analysis of Viable Environmental Organisms
	Air - Direct Examination	B-SOP-003	Spore Trap Analysis by Phase Contrast and Light Microscopy for the Analysis of Bioaerosols
	Bulk - Direct Examination	B-SOP-005	Analysis of Direct Exam Bulks/Swab/Tape
	Surface - Direct Examination	B-SOP-005	Analysis of Direct Exam Bulks/Swab/Tape

A complete listing of currently accredited Environmental Microbiology laboratories is available on the AIHA-LAP, LLC website at: <http://www.aihaaccreditedlabs.org>



AIHA Laboratory Accreditation Programs, LLC SCOPE OF ACCREDITATION

Scientific Analytical Institute, Inc.

4604 Dundas Dr., Greensboro, NC 27407

Laboratory ID: **173190**

Issue Date: 10/31/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Unique Scopes Laboratory Accreditation Program (Unique Scopes)

Initial Accreditation Date: 09/01/2014

Unique Scope Category	Field of Testing (FoT)	Method	Method Description <i>(for internal methods only)</i>
Consumer Product Testing	Lead in Paint and Other Similar Surface Coatings	CPSC-CH-E1003-09.1	L-SOP-014

A complete listing of currently accredited Unique Scope laboratories is available on the AIHA-LAP, LLC website at:

<http://www.aihaaccreditedlabs.org>