OCCU-TEC
Protecting People, Places and Performance

2604 NE Industrial Dr., Ste. 230
North Kansas City, MO 64117

February 6, 2025

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 105L**
**4300 Goodfellow Boulevard**
**St. Louis, Missouri 63120**
**OCCU-TEC Project No. 925001**

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 105L 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 January 15, 2025, 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 occupied spaces within the building. Surfaces sampled included floors, working surfaces, and surfaces above 70 inches that are not subjected to regular cleaning. The purpose of this testing was to further characterize the presence and concentration of target metals in occupied areas and determine if current cleaning efforts are sufficient to limit the accumulation of surface dust.

The proposed sampling scheme, the number of samples, the sample distribution and general methodology were 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 limited to only those areas within occupied spaces that may be routinely accessed by building personnel. Closed office spaces, mechanical rooms, basements, penthouses, tunnels and other mechanical spaces were not included in the testing.

Dust wipe sampling was conducted in accordance with ASTM Standard E1728/E1728M-24: Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Lead Determination. ASTM Standard E1728/E1728M-24 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.

A representative surface area of approximately one (1) square foot (SF) was measured and delineated with prefabricated, plastic templates which were thoroughly cleaned after each use. 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 Environmental Hazards Services, LLC (EHS) in Richmond, Virginia 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 six (6) of the seven (7) 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 Concentration (µg/sq. ft.) | Highest Concentration (µg/sq. ft.) | Clean Area Limit (µg/sq. ft.) |
|---|---|---|---|
| Arsenic | <2.50 | <2.50 | 62 |
| Barium | <0.50 | 15.00 | 3,094 |
| Cadmium | <0.10 | 4.10 | 31 |
| Total Chromium | <1.00 | 15.00 | 3,094 |
| Lead | <0.50 | 93.0 | 10 |
| Selenium | <2.50 | <2.50 | 1,236 |
| Silver | <0.50 | <0.50 | 62 |

One (1) of the wipe samples exceeded the Clean Area Limit for lead:

- 105L-W-07 – from a shelf in Room 111 – East Equipment Storage, which resulted in a lead concentration of 93.0 µg/ft$^2$.

Based on the results of the sampling, all similar surfaces within the vicinity should be presumed to contain measurable levels of RCRA metals and proper precautions and/or cleaning procedures should be taken upon entry and exit of the subject areas to protect occupants 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
Director of Environmental Health and Safety (QA/QC)

Appendices:

A – Sample Summary Table
B – Laboratory Analysis Report
C – Professional Accreditation

# APPENDIX A – SAMPLE SUMMARY TABLE

## Appendix A
## Sample Summary Table

| Building 105L Wipe Sample Results Summary Table | | | | | | |
|---|---|---|---|---|---|---|
| **Sample Number** | **Location** | **Area Description** | **Analyte** | **Result** | **Units** | **Clean Area Limit*** |
| 105L-W-01 | Center Hallway | Floor (Carpet) | Arsenic | < 2.50 | µg/ft$^2$ | 62 |
| | | | Barium | 1.80 | µg/ft$^2$ | 3,094 |
| | | | Cadmium | < 0.10 | µg/ft$^2$ | 31 |
| | | | Chromium | < 1.00 | µg/ft$^2$ | 3,094 |
| | | | Lead | 2.12 | µg/ft$^2$ | 10 |
| | | | Selenium | < 2.50 | µg/ft$^2$ | 1,236 |
| | | | Silver | < 0.50 | µg/ft$^2$ | 62 |
| 105L-W-02 | Room 111 | Top of Fridge (>70") | Arsenic | < 2.50 | µg/ft$^2$ | 62 |
| | | | Barium | 1.56 | µg/ft$^2$ | 3,094 |
| | | | Cadmium | < 0.18 | µg/ft$^2$ | 31 |
| | | | Chromium | < 1.00 | µg/ft$^2$ | 3,094 |
| | | | Lead | 1.80 | µg/ft$^2$ | 10 |
| | | | Selenium | < 2.50 | µg/ft$^2$ | 1,236 |
| | | | Silver | < 0.50 | µg/ft$^2$ | 62 |
| 105L-W-03 | Room 111 - west side | Work Station | Arsenic | < 2.50 | µg/ft$^2$ | 62 |
| | | | Barium | < 0.72 | µg/ft$^2$ | 3,094 |
| | | | Cadmium | < 0.10 | µg/ft$^2$ | 31 |
| | | | Chromium | < 1.00 | µg/ft$^2$ | 3,094 |
| | | | Lead | 0.67 | µg/ft$^2$ | 10 |
| | | | Selenium | < 2.50 | µg/ft$^2$ | 1,236 |
| | | | Silver | < 0.50 | µg/ft$^2$ | 62 |
| 105L-W-04 | Room 107 | Desk | Arsenic | < 2.50 | µg/ft$^2$ | 62 |
| | | | Barium | < 0.50 | µg/ft$^2$ | 3,094 |
| | | | Cadmium | < 0.10 | µg/ft$^2$ | 31 |
| | | | Chromium | < 1.00 | µg/ft$^2$ | 3,094 |
| | | | Lead | < 0.50 | µg/ft$^2$ | 10 |
| | | | Selenium | < 2.50 | µg/ft$^2$ | 1,236 |
| | | | Silver | < 0.50 | µg/ft$^2$ | 62 |

## Appendix A
## Sample Summary Table

| Sample Number | Location | Area Description | Analyte | Result | Units | Clean Area Limit* |
|---|---|---|---|---|---|---|
| 105L-W-05 | Room 106 | Top of Vending machine (>70") | Arsenic | < 2.50 | µg/ft$^2$ | 62 |
| | | | Barium | 3.90 | µg/ft$^2$ | 3,094 |
| | | | Cadmium | < 0.10 | µg/ft$^2$ | 31 |
| | | | Chromium | < 1.00 | µg/ft$^2$ | 3,094 |
| | | | Lead | 2.30 | µg/ft$^2$ | 10 |
| | | | Selenium | < 2.50 | µg/ft$^2$ | 1,236 |
| | | | Silver | < 0.50 | µg/ft$^2$ | 62 |
| 105L-W-06 | Room 106 - south entrance | Floor | Arsenic | < 2.50 | µg/ft$^2$ | 62 |
| | | | Barium | 0.94 | µg/ft$^2$ | 3,094 |
| | | | Cadmium | < 0.10 | µg/ft$^2$ | 31 |
| | | | Chromium | < 1.00 | µg/ft$^2$ | 3,094 |
| | | | Lead | 0.90 | µg/ft$^2$ | 10 |
| | | | Selenium | < 2.50 | µg/ft$^2$ | 1,236 |
| | | | Silver | < 0.50 | µg/ft$^2$ | 62 |
| 105L-W-07 | Room 111 - East Equipment Storage | Shelf | Arsenic | < 2.50 | µg/ft$^2$ | 62 |
| | | | Barium | 15.00 | µg/ft$^2$ | 3,094 |
| | | | Cadmium | 4.10 | µg/ft$^2$ | 31 |
| | | | Chromium | 15.00 | µg/ft$^2$ | 3,094 |
| | | | Lead | 93.00 | µg/ft$^2$ | 10 |
| | | | Selenium | < 2.50 | µg/ft$^2$ | 1,236 |
| | | | Silver | < 0.50 | µg/ft$^2$ | 62 |
| 105L-W-08 | Field Blank | | Arsenic | < 2.50 | µg | -- |
| | | | Barium | < 0.50 | µg | -- |
| | | | Cadmium | < 0.10 | µg | -- |
| | | | Chromium | < 1.00 | µg | -- |
| | | | Lead | < 0.50 | µg | -- |
| | | | Selenium | < 2.50 | µg | -- |
| | | | Silver | < 0.50 | µg | -- |

# APPENDIX B – LABORATORY ANALYSIS REPORT

EHS Laboratories
ENVIRONMENTAL HAZARDS SERVICES, LLC
7469 Whitepine Rd
North Chesterfield, VA 23237
Telephone: 800.347.4010

# Wipe Metals Analysis Report

**Client:** OCCU-Tec Inc
2604 NE Industrial Drive
Suite 230
North Kansas City, MO 64117

**Report Number:** 25-01-02713

**Received Date:** 01/16/2025
**Analyzed Date:** 01/22/2025
**Reported Date:** 01/24/2025

**Project/Test Address:** GSA Goodfellow Complex

**Client Number:**
202507

## Laboratory Results

**Fax Number:**

| Lab Sample Number | Client Sample Number | Analyte: | Wipe Area ($ft^2$) | Total Metal (ug) | Concentration ($ug/ft^2$) | Narrative ID |
|---|---|---|---|---|---|---|
| 25-01-02713-001 | 105L-W-01 | Arsenic (As) | 1.00 | <2.50 | <2.5 | |
| | | Barium (Ba) | 1.00 | 1.80 | 1.8 | |
| | | Cadmium (Cd) | 1.00 | <0.100 | <0.10 | |
| | | Chromium (Cr) | 1.00 | <1.00 | <1.0 | |
| | | Lead (Pb) | 1.00 | 2.12 | 2.1 | |
| | | Selenium (Se) | 1.00 | <2.50 | <2.5 | |
| | | Silver (Ag) | 1.00 | <0.500 | <0.50 | |
| 25-01-02713-002 | 105L-W-02 | Arsenic (As) | 1.00 | <2.50 | <2.5 | |
| | | Barium (Ba) | 1.00 | 1.56 | 1.6 | |
| | | Cadmium (Cd) | 1.00 | 0.180 | 0.18 | |
| | | Chromium (Cr) | 1.00 | <1.00 | <1.0 | |

**Client Number:** 202507 **Report Number:** 25-01-02713

**Project/Test Address:** GSA Goodfellow Complex

| Lab Sample Number | Client Sample Number | Analyte: | Wipe Area ($ft^2$) | Total Metal (ug) | Concentration ($ug/ft^2$) | Narrative ID |
|---|---|---|---|---|---|---|
| | | Lead (Pb) | 1.00 | 1.18 | 1.2 | |
| | | Selenium (Se) | 1.00 | <2.50 | <2.5 | |
| | | Silver (Ag) | 1.00 | <0.500 | <0.50 | |
| 25-01-02713-003 | 105L-W-03 | Arsenic (As) | 1.00 | <2.50 | <2.5 | |
| | | Barium (Ba) | 1.00 | 0.720 | 0.72 | |
| | | Cadmium (Cd) | 1.00 | <0.100 | <0.10 | |
| | | Chromium (Cr) | 1.00 | <1.00 | <1.0 | |
| | | Lead (Pb) | 1.00 | 0.670 | 0.67 | |
| | | Selenium (Se) | 1.00 | <2.50 | <2.5 | |
| | | Silver (Ag) | 1.00 | <0.500 | <0.50 | |
| 25-01-02713-004 | 105L-W-04 | Arsenic (As) | 1.00 | <2.50 | <2.5 | |
| | | Barium (Ba) | 1.00 | <0.500 | <0.50 | |
| | | Cadmium (Cd) | 1.00 | <0.100 | <0.10 | |
| | | Chromium (Cr) | 1.00 | <1.00 | <1.0 | |
| | | Lead (Pb) | 1.00 | <0.500 | <0.50 | |
| | | Selenium (Se) | 1.00 | <2.50 | <2.5 | |
| | | Silver (Ag) | 1.00 | <0.500 | <0.50 | |
| 25-01-02713-005 | 105L-W-05 | Arsenic (As) | 1.00 | <2.50 | <2.5 | |
| | | Barium (Ba) | 1.00 | 3.92 | 3.9 | |

**Client Number:** 202507 **Report Number:** 25-01-02713

**Project/Test Address:** GSA Goodfellow Complex

| Lab Sample Number | Client Sample Number | Analyte: | Wipe Area ($ft^2$) | Total Metal (ug) | Concentration ($ug/ft^2$) | Narrative ID |
|---|---|---|---|---|---|---|
| | | Cadmium (Cd) | 1.00 | <0.100 | <0.10 | |
| | | Chromium (Cr) | 1.00 | <1.00 | <1.0 | |
| | | Lead (Pb) | 1.00 | 2.34 | 2.3 | |
| | | Selenium (Se) | 1.00 | <2.50 | <2.5 | |
| | | Silver (Ag) | 1.00 | <0.500 | <0.50 | |
| 25-01-02713-006 | 105L-W-06 | Arsenic (As) | 1.00 | <2.50 | <2.5 | |
| | | Barium (Ba) | 1.00 | 0.935 | 0.94 | |
| | | Cadmium (Cd) | 1.00 | <0.100 | <0.10 | |
| | | Chromium (Cr) | 1.00 | <1.00 | <1.0 | |
| | | Lead (Pb) | 1.00 | 0.905 | 0.90 | |
| | | Selenium (Se) | 1.00 | <2.50 | <2.5 | |
| | | Silver (Ag) | 1.00 | <0.500 | <0.50 | |
| 25-01-02713-007 | 105L-W-07 | Arsenic (As) | 1.00 | <2.50 | <2.5 | |
| | | Barium (Ba) | 1.00 | 14.5 | 15 | |
| | | Cadmium (Cd) | 1.00 | 4.11 | 4.1 | |
| | | Chromium (Cr) | 1.00 | 15.4 | 15 | |
| | | Lead (Pb) | 1.00 | 93.4 | 93 | |
| | | Selenium (Se) | 1.00 | <2.50 | <2.5 | |
| | | Silver (Ag) | 1.00 | <0.500 | <0.50 | |

# Environmental Hazards Services, L.L.C

**Client Number:** 202507 **Report Number:** 25-01-02713
**Project/Test Address:** GSA Goodfellow Complex

| Lab Sample Number | Client Sample Number | Analyte: | Wipe Area ($ft^2$) | Total Metal (ug) | Concentration ($ug/ft^2$) | Narrative ID |
|---|---|---|---|---|---|---|
| 25-01-02713-008 | 105L-W-08 | Arsenic (As) | | <2.50 | <2.5 | |
| | | Barium (Ba) | | <0.500 | <0.50 | |
| | | Cadmium (Cd) | | <0.100 | <0.10 | |
| | | Chromium (Cr) | | <1.00 | <1.0 | |
| | | Lead (Pb) | | <0.500 | <0.50 | |
| | | Selenium (Se) | | <2.50 | <2.5 | |
| | | Silver (Ag) | | <0.500 | <0.50 | |

Sample Narratives:

**Analyst:** Carlos Gonzalez

**Method:** EPA SW846 3050B/6010D

Reviewed By Authorized Signatory: (b) (6) [redacted]

*Tasha Eaddy*

QA/QC Clerk

Sample Results denoted with a "less than" (<) sign contains less than the reporting limit based on a 50mL volume. The reporting limit for Lead is 0.5ug.

The condition of the samples analyzed was acceptable upon receipt per laboratory protocol unless otherwise noted on this report. Results represent the analysis of samples submitted by the client. Unless otherwise noted, samples are reported without a dry weight correction. Sample location, description, area, volume, etc., was provided by the client. If the report does not contain the result for a field blank, it is due to the fact that the client did not include a field blank with their samples. These sample results do not reflect blank correction. This report shall not be reproduced except in full, without the written consent of Environmental Hazards Services, L.L.C.

| Legend | ug = microgram | $ug/ft^2$ = micrograms per square foot |
|---|---|---|
| | mL = milliliter | $ft^2$ = square foot |

# ENVIRONMENTAL HAZARDS SERVICES, LLC

## Metals Chain of Custody Form



| | | | |
|---|---|---|---|
| Company Name | OCCU-TEC Inc. | Account # | 202507 |
| Company Address | 2604 NE Industrial Drive Suite 230 | City/State/Zip | North Kansas City, MO 64117 |
| Phone | 816-231-5580 | Email | jarnold@occutec.com |
| Project Name / Testing Address | GSA Goodfellow Complex | | |
| PO Number | 925001 | Collected By | Justin Arnold |

Turn-Around Time: (●) 5 Day ( ) 3 Day ( ) 2 Day ( ) 1 Day ( ) Same Day / Weekend - Must Call Ahead

| LAB NUMBER | Client Sample ID | Collection Date & Time | METALS: Pb TCLP | TCLP RCRA 8 | RCRA 8 Total | Toxic Metal Profile | Welding Fume Profile | TX 11 TCLP | CA 17 Total | Other Metals | PARTICULATES: Total Nuisance Dust | Respirable Dust | TSP Gravimetric | TSP Pb | PM-10 | AIR: Total Time (Min.) | Flow Rate (L/min) | Vol. (Total Liters) | WIPES: AREA (Circle Unit of Measurement Used: cm or in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 105L-A-01 | 1/15/25 0800 - 1204 | | | | | | | | Ag, As, Ba, Cd, Cr, Pb, Se | | | | | | 246 | 246 | 605.2 | x |
| 2 | 105L-A-02 | 0801 - 1207 | | | | | | | | | | | | | | 246 | 2.47 | 607.4 | x |
| 3 | 105L-A-03 | 0802 - 1208 | | | | | | | | | | | | | | 246 | 2.54 | 629.8 | x |
| 4 | 105L-A-04 | 0803 - 1209 | | | | | | | | | | | | | | 246 | 2.49 | 612.5 | x |
| 5 | 105L-A-05 | 0900 - | | | | | | | | | | | | | | - | - | - | x |
| 6 | | | | | | | | | | | | | | | | | | | x |
| 7 | 105L-W-01 | 1/15/25 0809 | | | | | | | | | | | | | | | | | 12 x 12 |
| 8 | 105L-W-02 | 0812 | | | | | | | | | | | | | | | | | 12 x 12 |
| 9 | 105L-W-03 | 0816 | | | | | | | | | | | | | | | | | 12 x 12 |
| 10 | 105L-W-04 | 0818 | | | | | | | | | | | | | | | | | 12 x 12 |
| 11 | 105L-W-05 | 0822 | | | | | | | | | | | | | | | | | 12 x 12 |
| 12 | 105L-W-06 | 0825 | | | | | | | | | | | | | | | | | 12 x 12 |
| 13 | 105L-W-07 | 0830 | | | | | | | | | | | | | | | | | 12 x 12 |
| 14 | 105L-W-08 | 0807 | | | | | | | | | | | | | | | | | - x - |
| 15 | | | | | | | | | | | | | | | | | | | x |

Released By: Justin Arnold Date: 1/15/25 Time: 1530

Signature: (b) (6) [redacted]

LAB USE ONLY – BELOW THIS LINE

Received By: PBrown

Signature: (b) (6) [redacted]

Date: 1/16/25 Time: 210 ☐ AM ☑ PM

☐ Portal Contact Added

25-01-02713

Due Date: 01/24/2025 (Friday)

AE P

7469 WHITEPINE RD, RICHMOND, VA 23237 (800)-347-4010

RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

# APPENDIX C – PROFESSIONAL ACCREDITATION

# STATE OF MISSOURI
# DEPARTMENT OF HEALTH AND SENIOR SERVICES

## LEAD ABATEMENT OCCUPATION LICENSE

Issued to:

# Justin 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: | **8/27/2024** |
| Expiration Date: | **8/27/2026** |
| License Number: | **120611-300003622** |

(b) (6) [redacted]

Paula F. Nickelson
Director
Department of Health and Senior Services

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