



September 15, 2023

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

Re: Goodfellow Federal Center – Building 107 Air and Wipe Sampling Evaluation Addendum
Project No. 121244

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, Burns & McDonnell conducted area air sampling and wipe sampling for the presence of seven (7) RCRA metals including arsenic, barium, cadmium, chromium, lead, selenium, and silver within the occupied areas of the first floor of building 107 of the Goodfellow Federal Center located at 4300 Goodfellow Boulevard in St. Louis, Missouri. The purpose of the investigation was to provide ongoing sampling data to monitor conditions at the site. This report serves as an addendum to the *Goodfellow Federal Center – Building 107 Air and Wipe Sampling Evaluation*, dated December 27, 2021.

SAMPLING METHODOLOGY

Dust wipe sampling was conducted in accordance with ASTM Standard E1728: *Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Lead Determination* and ASTM Standard D6966: *Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Determination of Metals*. ASTM Standards E1728 and D6966 are consistent with the methodology described in the Housing and Urban Development Guidelines-Appendix 13.1 and 40 CFR 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 square foot (1 SF) was measured and delineated. The dust wipe samples were collected using dedicated dust wipe cloths meeting ASTM E1792 Standard. 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 using a clean, disposable glove. Then, the wipe was folded over itself and the area was wiped again in a direction perpendicular to the first wipe orientation. Then, the wipe folded over itself again and the area was wiped around the perimeter. The wipe sample was then placed into a labeled, clean container.



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Air samples for RCRA metals were collected on 37-millimeter (mm) cassettes with 0.8 micrometer (μm) mixed cellulose ester (MCE) filters, using powered air sampling pumps, in accordance with the National Institute for Occupational Safety and Health (NIOSH) Method 7300. The sampling strategy included collecting a minimum sample volume of 500 liters based on the calibrated pump flow rate and sample duration.

All samples were submitted under chain-of-custody to Environmental Hazards Services, LLC (EHS) in Richmond, Virginia for independent analysis of 7 RCRA metals. Air samples were analyzed by Inductively Coupled Plasma (ICP) according to NIOSH method 7300. Wipe samples were analyzed according to Environmental Protection Agency (EPA) method SW846-3050B/6010D. EHS is accredited under the American Industrial Hygiene Association (AIHA) Industrial Hygiene Laboratory Accreditation Program (IHLAP) program, identification number LAP-100420.

SAMPLE SUMMARY AND RESULTS

Air and wipe samples were collected on August 25, 2023, by Justin Arnold of Occutec.

One (1) air sample was collected on the 1st floor in room 100. All analytes were below laboratory reporting limits. The complete air sampling laboratory report from EHS is included as Appendix A.

One (1) wipe sample was collected on the 1st floor, room 100, from the top of a cabinet above a desk. Barium was detected at a concentration of $0.73 \mu\text{g}/\text{ft}^2$. All other analytes were below laboratory reporting limits. The complete wipe sampling laboratory report from EHS is included in Appendix B.

LIMITATIONS

The scope of this assessment was limited in nature. Burns & McDonnell collected samples from a representative number of surfaces in an effort to minimize cost while providing a general overview of site conditions. Sample locations do not encompass all surfaces at the site. Additionally, samples were only analyzed for a select number of potential contaminants. Burns & McDonnell is not responsible for potential contaminants not identified in this report.

Burns & McDonnell appreciates the opportunity to work for GSA on this project. Please contact us if you have any questions regarding this report or if we may be of any additional service.



Diane Czamecki
Facilities Management Division
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Sincerely,

(b) (6)

A large black rectangular redaction box covers the signature area, with the text "(b) (6)" written in red at the top left corner of the box.

Matt Shanahan, CHMM
Project Manager

Attachments:

- Appendix A – Air Sampling Laboratory Report
- Appendix B – Wipe Sampling Laboratory Report

Information in Appendices A and B are not accessible for people using screen reader technology. If this information is required, it can be furnished upon request by contacting 816-223-6198 or r6environmental@gsa.gov.

APPENDIX A – AIR SAMPLING LABORATORY REPORT



Air Metals Analysis Report

Environmental Hazards Services, L.L.C.
7469 Whitepine Rd
Richmond, VA 23237
Telephone: 800.347.4010

Client: Burns & McDonnell Engineering
9400 Ward Pkwy.
Kansas City, MO 64114

Report Number: 23-08-04803
Received Date: 08/30/2023
Reported Date: 09/07/2023

Project/Test Address: 168765, GFC 4300 Goodfellow Blvd

Client Number:
26-3514

Fax Number:
816-822-3494

Laboratory Results

| Lab Sample Number | Client Sample Number | Analyzed Date | Analyte | Air Volume (L) | Total Metal (ug) | Concentration (ug/m ³) | Narrative ID |
|-------------------|----------------------|---------------|---------------|----------------|------------------|------------------------------------|--------------|
| 23-08-04803-001 | 107-A-01 | 09/06/2023 | Arsenic (As) | 609.6 | <0.15 | <0.25 | |
| | | | Barium (Ba) | | <0.15 | <0.25 | |
| | | | Cadmium (Cd) | | <0.030 | <0.050 | |
| | | | Chromium (Cr) | | <0.75 | <1.3 | |
| | | | Lead (Pb) | | <0.15 | <0.25 | |
| | | | Selenium (Se) | | <0.75 | <1.3 | |
| | | | Silver (Ag) | | <0.15 | <0.25 | |
| 23-08-04803-002 | 107-A-02 | 09/06/2023 | Arsenic (As) | -- | <0.15 | --- | |
| | | | Barium (Ba) | | <0.15 | --- | |
| | | | Cadmium (Cd) | | <0.030 | --- | |
| | | | Chromium (Cr) | | <0.75 | --- | |
| | | | Lead (Pb) | | <0.15 | --- | |
| | | | Selenium (Se) | | <0.75 | --- | |
| | | | Silver (Ag) | | <0.15 | --- | |

Environmental Hazards Services, L.L.C

Client Number: 26-3514

Report Number: 23-08-04803

Project/Test Address: 168765, GFC 4300 Goodfellow Blvd

| Lab Sample Number | Client Sample Number | Analyzed Date | Analyte | Air Volume (L) | Total Metal (ug) | Concentration (ug/m ³) | Narrative ID |
|-------------------|----------------------|---------------|---------|----------------|------------------|------------------------------------|--------------|
|-------------------|----------------------|---------------|---------|----------------|------------------|------------------------------------|--------------|

Sample Narratives:

Method: NIOSH 7300M

Analyst: Max Dichek

(b) (6)

Reviewed By Authorized Signatory:

Tasha Eaddy
QA/QC Clerk

Sample Results denoted with a "less than" (<) sign contains less than the reporting limit for each particular metal, based on a 15mL volume. The reporting limit is 0.03ug for Cadmium, 0.15ug for Arsenic, Barium, Lead and Silver, and 0.75ug for Chromium and Selenium.

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/m³ = micrograms per cubic meter
 mL = milliliter L = Liters

ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

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| | | | |
|--------------------------------|---|--------------------------------|---------------------------------------|
| Company Name | Burns & McDonnell | Account # | 26-3514 |
| Company Address | 9400 Ward Parkway | City/State/Zip | Kansas City, MO 64114 |
| Phone | 314-302-4661 | Email | eapulcher@burnsmcd.com |
| Project Name / Testing Address | GFC / 4300 Goodfellow Blvd | | |
| PO Number | 168765 | Collected By | Justin Arnold |
| Turn-Around Time | <input checked="" type="checkbox"/> 5 DAY | <input type="checkbox"/> 3 DAY | <input type="checkbox"/> 2 DAY |
| | | <input type="checkbox"/> 1 DAY | SAME DAY OR WEEKEND - Must Call Ahead |

| Client Sample ID | Collection Date & Time | METALS | | | | | | | PARTICULATES | | | | AIR | | | WIPES | | |
|------------------|------------------------|---------|-------------|--------------|---------------------|----------------------|------------|----------------------------|--------------|---------------------|-----------------|-----------------|--------|-------|------------|-----------|---|---------|
| | | Pb TCLP | TCLP RCRA 8 | RCRA 8 Total | Toxic Metal Profile | Wedding Fume Profile | TX 11 TCLP | CA 17 Total | Other Metals | Total Nuisance Dust | Respirable Dust | TSP Gravimetric | TSP Pb | PM-10 | Total Time | Flow Rate | % | AREA |
| 107-W-01 | 8-25-23 0810 | | | | | | | Ag, As, Ba, Cd, Cr, Pb, Se | | | | | | | | | | 12 x 12 |
| 107-W-02 | 8-25-23 0813 | | | | | | | X | | | | | | | | | | NA x NA |
| 107-A-01 | 8-25-23 0710 - 1110 | | | | | | | X | | | | | | 240 | 2.54 | 609.6 | | x |
| 107-A-02 | 8-25-23 0713 | | | | | | | X | | | | | | NA | NA | NA | | x |
| | | | | | | | | | | | | | | | | | | x |
| | | | | | | | | | | | | | | | | | | x |
| | | | | | | | | | | | | | | | | | | x |
| | | | | | | | | | | | | | | | | | | x |
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| | | | | | | | | | | | | | | | | | | x |
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| | | | | | | | | | | | | | | | | | | x |
| | | | | | | | | | | | | | | | | | | x |
| | | | | | | | | | | | | | | | | | | x |

Released By: Justin Arnold Date: _____ Time: _____

Signature: (b) (6)

LAB USE ONLY - BELOW THIS LINE

Received By: H Humphrey

Signature: (b) (6)

Date: 8/30/23 Time: 1:01 AM PM

Portal Contact Added

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

RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

23-08-04803



Due Date:
09/07/2023
(Thursday)
EL MM-L

APPENDIX B – WIPE SAMPLING LABORATORY REPORT



Environmental Hazards Services, L.L.C.
 7469 Whitepine Rd
 Richmond, VA 23237
 Telephone: 800.347.4010

Wipe Metals Analysis Report

Client: Burns & McDonnell Engineering
 9400 Ward Pkwy.
 Kansas City, MO 64114

Report Number: 23-08-04801

Received Date: 08/30/2023

Analyzed Date: 09/07/2023

Reported Date: 09/07/2023

Project/Test Address: 168765, GFC 4300 Goodfellow

Client Number:
 26-3514

Laboratory Results

Fax Number:
 816-822-3494

| Lab Sample Number | Client Sample Number | Analyte: | Wipe Area (ft ²) | Total Metal (ug) | Concentration (ug/ft ²) | Narrative ID |
|-------------------|----------------------|---------------|------------------------------|------------------|-------------------------------------|--------------|
| 23-08-04801-001 | 107-W-01 | Arsenic (As) | 1.00 | <2.50 | <2.5 | |
| | | Barium (Ba) | 1.00 | 0.730 | 0.73 | |
| | | 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 | |
| 23-08-04801-002 | 107-W-02 | Arsenic (As) | | <2.50 | --- | |
| | | Barium (Ba) | | <0.500 | --- | |
| | | Cadmium (Cd) | | <0.100 | --- | |
| | | Chromium (Cr) | | <1.00 | --- | |

Environmental Hazards Services, L.L.C

Client Number: 26-3514

Report Number: 23-08-04801

Project/Test Address: 168765, GFC 4300 Goodfellow

| Lab Sample Number | Client Sample Number | Analyte: | Wipe Area (ft ²) | Total Metal (ug) | Concentration (ug/ft ²) | Narrative ID |
|-------------------|----------------------|---------------|------------------------------|------------------|-------------------------------------|--------------|
| | | Lead (Pb) | | <0.500 | --- | |
| | | Selenium (Se) | | <2.50 | --- | |
| | | Silver (Ag) | | <0.500 | --- | |

Sample Narratives:

Analyst: Carlos Gonzalez

Method: EPA SW846 3050B/6010D

(b) (6)

Reviewed By Authorized Signatory:

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/ft² = micrograms per square foot
 mL = milliliter ft² = square foot

ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

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| | | | |
|--------------------------------|----------------------------|----------------|------------------------|
| Company Name | Burns & McDonnell | Account # | 26-3514 |
| Company Address | 9400 Ward Parkway | City/State/Zip | Kansas City, MO 64114 |
| Phone | 314-302-4661 | Email | eapulcher@burnsmcd.com |
| Project Name / Testing Address | GFC / 4300 Goodfellow Blvd | | |
| PO Number | 168765 | Collected By | Justin Arnold |

Turn-Around Time: 5 DAY 3 DAY 2 DAY 1 DAY SAME DAY OR WEEKEND - Must Call Ahead

| LAB NUMBER | Client Sample ID | Collection Date & Time | METALS | | | | | | | Other Metals | PARTICULATES | | | | AIR | | | WIPES AREA <small>Circle the Unit of Measurement used</small> cm in ft | |
|------------|------------------|------------------------|---------|-------------|--------------|---------------------|----------------------|------------|----------------------------|--------------|---------------------|-----------------|-----------------|--------|-------|------------|-----------|---|--------------|
| | | | Pb TCLP | TCLP RCRA 8 | RCRA 8 Total | Toxic Metal Profile | Welding Fume Profile | TX 11 TCLP | CA 17 Total | | Total Nuisance Dust | Respirable Dust | TSP Gravimetric | TSP Pb | PM-10 | Total Time | Flow Rate | | Vol |
| | | | | | | | | | | | | | | | | Min: | Units: | | Total Liters |
| | 107-W-01 | 8-25-23 0813 | | | | | | | Ag, As, Ba, Cd, Cr, Pb, Se | | | | | | | | | 12 x 12 | |
| | 107-W-02 | 8-25-23 0813 | | | | | | | X | | | | | | | | | NA x NA | |
| | 107-A-01 | 8-25-23 0710 - 1110 | | | | | | | X | | | | | 240 | 2.54 | 609.4 | | X | |
| | 107-A-02 | 8-25-23 0713 | | | | | | | X | | | | | NA | NA | NA | | X | |
| | | | | | | | | | | | | | | | | | | X | |
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| | | | | | | | | | | | | | | | | | | X | |

Released By: Justin Arnold Date: _____ Time: _____

Signature: (b) (6)

LAB USE ONLY - BELOW THIS LINE

Received By: HHumphrey
 Signature: (b) (6)
 Date: 8/30/23 Time: 1:01 AM PM

23-08-04801



Due Date:
09/07/2023
(Thursday)
EL MM-L