July 13, 2021

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

Re: Goodfellow Federal Center – Bldg. 110 Air Sampling
Project No. 121244

Dear Ms. Czarnecki:

Thank you for the opportunity to provide the General Services Administration (GSA) with the Resource Conservation and Recovery Act (RCRA) metals air sampling investigation of the above referenced building located at the Goodfellow Federal Complex, in St. Louis, Missouri. Burns & McDonnell understands that the purpose of the investigation was to provide sampling data regarding existing conditions to supplement previous investigation reports prepared for the facility. The following report summarizes air-sample collection activities and the laboratory analytical results of the samples submitted.

**METHODOLOGY**

On June 23, 2021, Emily Ahlemeyer and Ashley Anstaett of Burns & McDonnell conducted area air-sampling for the presence of seven (7) of the RCRA metals including arsenic, barium, cadmium, chromium, lead, selenium, and silver. Sampling was conducted in various locations throughout Building 110.

The sampling scheme, number of samples, sample distribution, and general methodology was developed based on previous investigation methodology and in coordination with the GSA. Sample locations and samples collected from discretionary locations were determined by sampling personnel while on-site.

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. Air samples were submitted under chain-of-custody to Environmental Hazards Services, LLC (EHS) in Richmond, Virginia for independent analysis of 7 RCRA metals according to NIOSH method 7300. EHS is accredited under the American Industrial Hygiene Association (AIHA) Industrial Hygiene Laboratory Accreditation Program (IHLAP) program, identification number LAP-100420.

## RESULTS AND DISCUSSION

Results of the air sampling are summarized in the table below by identifying the range of results for Building 110 for each of the seven (7) metals that were sampled. Results indicate that all 22 air samples collected from Building 110 and analyzed for RCRA metals were below their respective OSHA Permissible Exposure Limit (PEL), as based on a time-weighted-average.

**Table 1. Summary of Air Sampling Results**

| Analyte | Lowest Concentration[(a)] ($\mu g/m^3$) [(b)] | Highest Concentration[(a)] ($\mu g/m^3$) [(b)] | Permissible Exposure Limit (PEL) ($\mu g/m^3$) [(b)] |
|---|---|---|---|
| Arsenic | <0.20 | <0.30 | 10 |
| Barium | <0.20 | <0.30 | 500 |
| Cadmium | <0.039 | <0.059 | 5 |
| Chromium (Total) | <1.0 | <1.5 | 500 |
| Lead | <0.20 | <0.30 | 50 |
| Selenium | <1.0 | <1.5 | 200 |
| Silver | <0.20 | <0.30 | 10 |

Notes:

(a) Samples with a "<" sign indicate that the results were below the laboratory's reporting limit, which varies based on sample air volume.

(b) $\mu g/m^3$ = micrograms per cubic meter of air.

GSA may choose to compare results with guidance limits from additional organizations for risk evaluation, including but not limited to the American Conference of Governmental Industrial Hygienists (ACGIH) and/or the World Health Organization (WHO).

A summary table of all sampling results by location is included in Appendix A. The complete laboratory report for the air sampling from EHS is attached in Appendix B.

## LIMITATIONS

The scope of this assessment was limited as follows. Burns & McDonnell collected samples from a select number of locations in an effort to minimize cost while providing a general overview of the air quality at the site. Sample locations do not encompass every indoor space at the site. Additionally, based on previous sampling history, samples were only analyzed for a select number of potential contaminants likely to affect the air quality at the site. Burns &

McDonnell is not responsible for potential contaminants not identified in this report. This report was prepared for the sole use of GSA.

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

Sincerely,

(b) (6)

Matt Shanahan, CHMM
Project Manager

Attachments:
Appendix A – Results Summary by Location
Appendix B – Air Sample Laboratory Report

Information in Appendices A and B is 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 – RESULTS SUMMARY BY LOCATION

## Appendix A
## Results Summary by Location

| Sample Number | Location | Analyte | Result | Units | Recommended Limits[1] |
|---|---|---|---|---|---|
| 110-A-01 | 1st floor, windowsill, column J4 | Arsenic | < 0.30 | µg/m$^3$ | 10 |
| | | Barium | < 0.30 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.059 | µg/m$^3$ | 5 |
| | | Chromium | < 1.5 | µg/m$^3$ | 500 |
| | | Lead | < 0.30 | µg/m$^3$ | 50 |
| | | Selenium | < 1.5 | µg/m$^3$ | 200 |
| | | Silver | < 0.30 | µg/m$^3$ | 10 |
| 110-A-02 | 1st floor, room 1001A, column E2 | Arsenic | < 0.30 | µg/m$^3$ | 10 |
| | | Barium | < 0.30 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.059 | µg/m$^3$ | 5 |
| | | Chromium | < 1.5 | µg/m$^3$ | 500 |
| | | Lead | < 0.30 | µg/m$^3$ | 50 |
| | | Selenium | < 1.5 | µg/m$^3$ | 200 |
| | | Silver | < 0.30 | µg/m$^3$ | 10 |
| 110-A-03 | 1st floor, warehouse, top of wooden shelf | Arsenic | < 0.30 | µg/m$^3$ | 10 |
| | | Barium | < 0.30 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.059 | µg/m$^3$ | 5 |
| | | Chromium | < 1.5 | µg/m$^3$ | 500 |
| | | Lead | < 0.30 | µg/m$^3$ | 50 |
| | | Selenium | < 1.5 | µg/m$^3$ | 200 |
| | | Silver | < 0.30 | µg/m$^3$ | 10 |
| 110-A-04 | 1st floor, column F8, top of furniture | Arsenic | < 0.30 | µg/m$^3$ | 10 |
| | | Barium | < 0.30 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.059 | µg/m$^3$ | 5 |
| | | Chromium | < 1.5 | µg/m$^3$ | 500 |
| | | Lead | < 0.30 | µg/m$^3$ | 50 |
| | | Selenium | < 1.5 | µg/m$^3$ | 200 |
| | | Silver | < 0.30 | µg/m$^3$ | 10 |
| 110-A-05 | 1st floor, break room, column F10 | Arsenic | < 0.30 | µg/m$^3$ | 10 |
| | | Barium | < 0.30 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.059 | µg/m$^3$ | 5 |
| | | Chromium | < 1.5 | µg/m$^3$ | 500 |
| | | Lead | < 0.30 | µg/m$^3$ | 50 |
| | | Selenium | < 1.5 | µg/m$^3$ | 200 |
| | | Silver | < 0.30 | µg/m$^3$ | 10 |

## Appendix A
## Results Summary by Location

| Sample Number | Location | Analyte | Result | Units | Recommended Limits[1] |
|---|---|---|---|---|---|
| 110-A-06 | 1st floor, column K13 on desk | Arsenic | < 0.29 | µg/m$^3$ | 10 |
| | | Barium | < 0.29 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.057 | µg/m$^3$ | 5 |
| | | Chromium | < 1.5 | µg/m$^3$ | 500 |
| | | Lead | < 0.29 | µg/m$^3$ | 50 |
| | | Selenium | < 1.5 | µg/m$^3$ | 200 |
| | | Silver | < 0.29 | µg/m$^3$ | 10 |
| 110-A-07 | 1st floor, top of fridge, column E16 | Arsenic | < 0.28 | µg/m$^3$ | 10 |
| | | Barium | < 0.28 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.055 | µg/m$^3$ | 5 |
| | | Chromium | < 1.4 | µg/m$^3$ | 500 |
| | | Lead | < 0.28 | µg/m$^3$ | 50 |
| | | Selenium | < 1.4 | µg/m$^3$ | 200 |
| | | Silver | < 0.28 | µg/m$^3$ | 10 |
| 110-A-08 | Ice JV warehouse break area | Arsenic | < 0.29 | µg/m$^3$ | 10 |
| | | Barium | < 0.29 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.058 | µg/m$^3$ | 5 |
| | | Chromium | < 1.5 | µg/m$^3$ | 500 |
| | | Lead | < 0.29 | µg/m$^3$ | 50 |
| | | Selenium | < 1.5 | µg/m$^3$ | 200 |
| | | Silver | < 0.29 | µg/m$^3$ | 10 |
| 110-A-09 | Goodwill offices break area | Arsenic | < 0.29 | µg/m$^3$ | 10 |
| | | Barium | < 0.29 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.057 | µg/m$^3$ | 5 |
| | | Chromium | < 1.5 | µg/m$^3$ | 500 |
| | | Lead | < 0.29 | µg/m$^3$ | 50 |
| | | Selenium | < 1.5 | µg/m$^3$ | 200 |
| | | Silver | < 0.29 | µg/m$^3$ | 10 |
| 110-A-10 | Ice JV offices | Arsenic | < 0.28 | µg/m$^3$ | 10 |
| | | Barium | < 0.28 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.056 | µg/m$^3$ | 5 |
| | | Chromium | < 1.4 | µg/m$^3$ | 500 |
| | | Lead | < 0.28 | µg/m$^3$ | 50 |
| | | Selenium | < 1.4 | µg/m$^3$ | 200 |
| | | Silver | < 0.28 | µg/m$^3$ | 10 |

## Appendix A
## Results Summary by Location

| Sample Number | Location | Analyte | Result | Units | Recommended Limits[1] |
|---|---|---|---|---|---|
| 110-A-11 | Field blank | Arsenic | < 0.15 | µg | -- |
| | | Barium | < 0.15 | µg | -- |
| | | Cadmium | < 0.030 | µg | -- |
| | | Chromium | < 0.75 | µg | -- |
| | | Lead | < 0.15 | µg | -- |
| | | Selenium | < 0.75 | µg | -- |
| | | Silver | < 0.15 | µg | -- |
| 110-A-12 | 2nd floor, MWTC, training room | Arsenic | < 0.21 | $\mu g/m^3$ | 10 |
| | | Barium | < 0.21 | $\mu g/m^3$ | 500 |
| | | Cadmium | < 0.041 | $\mu g/m^3$ | 5 |
| | | Chromium | < 1.1 | $\mu g/m^3$ | 500 |
| | | Lead | < 0.21 | $\mu g/m^3$ | 50 |
| | | Selenium | < 1.1 | $\mu g/m^3$ | 200 |
| | | Silver | < 0.21 | $\mu g/m^3$ | 10 |
| 110-A-13 | 2nd floor, MWTC, column D16 | Arsenic | < 0.21 | $\mu g/m^3$ | 10 |
| | | Barium | < 0.21 | $\mu g/m^3$ | 500 |
| | | Cadmium | < 0.042 | $\mu g/m^3$ | 5 |
| | | Chromium | < 1.1 | $\mu g/m^3$ | 500 |
| | | Lead | < 0.21 | $\mu g/m^3$ | 50 |
| | | Selenium | < 1.1 | $\mu g/m^3$ | 200 |
| | | Silver | < 0.21 | $\mu g/m^3$ | 10 |
| 110-A-14 | 2nd floor, column F13, cubicle | Arsenic | < 0.21 | $\mu g/m^3$ | 10 |
| | | Barium | < 0.21 | $\mu g/m^3$ | 500 |
| | | Cadmium | < 0.042 | $\mu g/m^3$ | 5 |
| | | Chromium | < 1.1 | $\mu g/m^3$ | 500 |
| | | Lead | < 0.21 | $\mu g/m^3$ | 50 |
| | | Selenium | < 1.1 | $\mu g/m^3$ | 200 |
| | | Silver | < 0.21 | $\mu g/m^3$ | 10 |
| 110-A-15 | 2nd floor, column J12, office | Arsenic | < 0.21 | $\mu g/m^3$ | 10 |
| | | Barium | < 0.21 | $\mu g/m^3$ | 500 |
| | | Cadmium | < 0.042 | $\mu g/m^3$ | 5 |
| | | Chromium | < 1.1 | $\mu g/m^3$ | 500 |
| | | Lead | < 0.21 | $\mu g/m^3$ | 50 |
| | | Selenium | < 1.1 | $\mu g/m^3$ | 200 |
| | | Silver | < 0.21 | $\mu g/m^3$ | 10 |

## Appendix A
## Results Summary by Location

| Sample Number | Location | Analyte | Result | Units | Recommended Limits[1] |
|---|---|---|---|---|---|
| 110-A-16 | 2nd floor, column F10, common break room | Arsenic | < 0.21 | µg/m$^3$ | 10 |
| | | Barium | < 0.21 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.042 | µg/m$^3$ | 5 |
| | | Chromium | < 1.1 | µg/m$^3$ | 500 |
| | | Lead | < 0.21 | µg/m$^3$ | 50 |
| | | Selenium | < 1.1 | µg/m$^3$ | 200 |
| | | Silver | < 0.21 | µg/m$^3$ | 10 |
| 110-A-17 | 2nd floor, column D8, alcove | Arsenic | < 0.20 | µg/m$^3$ | 10 |
| | | Barium | < 0.20 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.040 | µg/m$^3$ | 5 |
| | | Chromium | < 1.0 | µg/m$^3$ | 500 |
| | | Lead | < 0.20 | µg/m$^3$ | 50 |
| | | Selenium | < 1.0 | µg/m$^3$ | 200 |
| | | Silver | < 0.20 | µg/m$^3$ | 10 |
| 110-A-18 | 2nd floor, column D4, office | Arsenic | < 0.20 | µg/m$^3$ | 10 |
| | | Barium | < 0.20 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.039 | µg/m$^3$ | 5 |
| | | Chromium | < 0.97 | µg/m$^3$ | 500 |
| | | Lead | < 0.20 | µg/m$^3$ | 50 |
| | | Selenium | < 0.97 | µg/m$^3$ | 200 |
| | | Silver | < 0.20 | µg/m$^3$ | 10 |
| 110-A-19 | 2nd floor, column J3, common space | Arsenic | < 0.21 | µg/m$^3$ | 10 |
| | | Barium | < 0.21 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.042 | µg/m$^3$ | 5 |
| | | Chromium | < 1.1 | µg/m$^3$ | 500 |
| | | Lead | < 0.21 | µg/m$^3$ | 50 |
| | | Selenium | < 1.1 | µg/m$^3$ | 200 |
| | | Silver | < 0.21 | µg/m$^3$ | 10 |
| 110-A-20 | 2nd floor, column M4, window sill | Arsenic | < 0.21 | µg/m$^3$ | 10 |
| | | Barium | < 0.21 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.041 | µg/m$^3$ | 5 |
| | | Chromium | < 1.1 | µg/m$^3$ | 500 |
| | | Lead | < 0.21 | µg/m$^3$ | 50 |
| | | Selenium | < 1.1 | µg/m$^3$ | 200 |
| | | Silver | < 0.21 | µg/m$^3$ | 10 |

## Appendix A
## Results Summary by Location

| Sample Number | Location | Analyte | Result | Units | Recommended Limits[1] |
|---|---|---|---|---|---|
| 110-A-21 | 2nd floor, column F5, office | Arsenic | < 0.21 | µg/m$^3$ | 10 |
| | | Barium | < 0.21 | µg/m$^3$ | 500 |
| | | Cadmium | < 0.041 | µg/m$^3$ | 5 |
| | | Chromium | < 1.1 | µg/m$^3$ | 500 |
| | | Lead | < 0.21 | µg/m$^3$ | 50 |
| | | Selenium | < 1.1 | µg/m$^3$ | 200 |
| | | Silver | < 0.21 | µg/m$^3$ | 10 |
| 110-A-22 | Field blank | Arsenic | < 0.15 | µg | -- |
| | | Barium | < 0.15 | µg | -- |
| | | Cadmium | < 0.030 | µg | -- |
| | | Chromium | < 0.75 | µg | -- |
| | | Lead | < 0.15 | µg | -- |
| | | Selenium | < 0.75 | µg | -- |
| | | Silver | < 0.15 | µg | -- |

Notes:

[1]Limits equal to the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs)

# APPENDIX B – AIR SAMPLE LABORATORY REPORT

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

# Air Metals Analysis Report

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

Report Number: 21-06-04596
Received Date: 06/29/2021
Reported Date: 07/02/2021

Project/Test Address: 168765; GFC; 4300 Goodfellow Blvd.

Client Number: 26-3514

## Laboratory Results

Fax Number: 816-822-3494

| Lab Sample Number | Client Sample Number | Analyzed Date | Analyte | Air Volume (L) | Total Metal (ug) | Concentration (ug/m³) | Narrative ID |
|---|---|---|---|---|---|---|---|
| 21-06-04596-001 | 110-A-01 | 06/30/2021 | Arsenic (As) | 513 | <0.15 | <0.30 | |
| | | | Barium (Ba) | | <0.15 | <0.30 | |
| | | | Cadmium (Cd) | | <0.030 | <0.059 | |
| | | | Chromium (Cr) | | <0.75 | <1.5 | |
| | | | Lead (Pb) | | <0.15 | <0.30 | |
| | | | Selenium (Se) | | <0.75 | <1.5 | |
| | | | Silver (Ag) | | <0.15 | <0.30 | |
| 21-06-04596-002 | 110-A-02 | 06/30/2021 | Arsenic (As) | 513 | <0.15 | <0.30 | |
| | | | Barium (Ba) | | <0.15 | <0.30 | |
| | | | Cadmium (Cd) | | <0.030 | <0.059 | |
| | | | Chromium (Cr) | | <0.75 | <1.5 | |
| | | | Lead (Pb) | | <0.15 | <0.30 | |
| | | | Selenium (Se) | | <0.75 | <1.5 | |
| | | | Silver (Ag) | | <0.15 | <0.30 | |
| 21-06-04596-003 | 110-A-03 | 06/30/2021 | Arsenic (As) | 513 | <0.15 | <0.30 | |
| | | | Barium (Ba) | | <0.15 | <0.30 | |
| | | | Cadmium (Cd) | | <0.030 | <0.059 | |

Client Number: 26-3514 Report Number: 21-06-04596

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/m³) | Narrative ID |
|---|---|---|---|---|---|---|---|
| | | | Chromium (Cr) | | <0.75 | <1.5 | |
| | | | Lead (Pb) | | <0.15 | <0.30 | |
| | | | Selenium (Se) | | <0.75 | <1.5 | |
| | | | Silver (Ag) | | <0.15 | <0.30 | |
| 21-06-04596-004 | 110-A-04 | 06/30/2021 | Arsenic (As) | 515 | <0.15 | <0.30 | |
| | | | Barium (Ba) | | <0.15 | <0.30 | |
| | | | Cadmium (Cd) | | <0.030 | <0.059 | |
| | | | Chromium (Cr) | | <0.75 | <1.5 | |
| | | | Lead (Pb) | | <0.15 | <0.30 | |
| | | | Selenium (Se) | | <0.75 | <1.5 | |
| | | | Silver (Ag) | | <0.15 | <0.30 | |
| 21-06-04596-005 | 110-A-05 | 06/30/2021 | Arsenic (As) | 510 | <0.15 | <0.30 | |
| | | | Barium (Ba) | | <0.15 | <0.30 | |
| | | | Cadmium (Cd) | | <0.030 | <0.059 | |
| | | | Chromium (Cr) | | <0.75 | <1.5 | |
| | | | Lead (Pb) | | <0.15 | <0.30 | |
| | | | Selenium (Se) | | <0.75 | <1.5 | |
| | | | Silver (Ag) | | <0.15 | <0.30 | |
| 21-06-04596-006 | 110-A-06 | 06/30/2021 | Arsenic (As) | 530 | <0.15 | <0.29 | |
| | | | Barium (Ba) | | <0.15 | <0.29 | |
| | | | Cadmium (Cd) | | <0.030 | <0.057 | |
| | | | Chromium (Cr) | | <0.75 | <1.5 | |
| | | | Lead (Pb) | | <0.15 | <0.29 | |
| | | | Selenium (Se) | | <0.75 | <1.5 | |
| | | | Silver (Ag) | | <0.15 | <0.29 | |

# Environmental Hazards Services, L.L.C

Client Number: 26-3514 Report Number: 21-06-04596

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/m³) | Narrative ID |
|---|---|---|---|---|---|---|---|
| 21-06-04596-007 | 110-A-07 | 06/30/2021 | Arsenic (As) | 548 | <0.15 | <0.28 | |
| | | | Barium (Ba) | | <0.15 | <0.28 | |
| | | | Cadmium (Cd) | | <0.030 | <0.055 | |
| | | | Chromium (Cr) | | <0.75 | <1.4 | |
| | | | Lead (Pb) | | <0.15 | <0.28 | |
| | | | Selenium (Se) | | <0.75 | <1.4 | |
| | | | Silver (Ag) | | <0.15 | <0.28 | |
| 21-06-04596-008 | 110-A-08 | 06/30/2021 | Arsenic (As) | 523 | <0.15 | <0.29 | |
| | | | Barium (Ba) | | <0.15 | <0.29 | |
| | | | Cadmium (Cd) | | <0.030 | <0.058 | |
| | | | Chromium (Cr) | | <0.75 | <1.5 | |
| | | | Lead (Pb) | | <0.15 | <0.29 | |
| | | | Selenium (Se) | | <0.75 | <1.5 | |
| | | | Silver (Ag) | | <0.15 | <0.29 | |
| 21-06-04596-009 | 110-A-09 | 06/30/2021 | Arsenic (As) | 533 | <0.15 | <0.29 | |
| | | | Barium (Ba) | | <0.15 | <0.29 | |
| | | | Cadmium (Cd) | | <0.030 | <0.057 | |
| | | | Chromium (Cr) | | <0.75 | <1.5 | |
| | | | Lead (Pb) | | <0.15 | <0.29 | |
| | | | Selenium (Se) | | <0.75 | <1.5 | |
| | | | Silver (Ag) | | <0.15 | <0.29 | |
| 21-06-04596-010 | 110-A-10 | 06/30/2021 | Arsenic (As) | 541 | <0.15 | <0.28 | |
| | | | Barium (Ba) | | <0.15 | <0.28 | |
| | | | Cadmium (Cd) | | <0.030 | <0.056 | |
| | | | Chromium (Cr) | | <0.75 | <1.4 | |

Client Number: 26-3514 Report Number: 21-06-04596

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/m³) | Narrative ID |
|---|---|---|---|---|---|---|---|
| | | | Lead (Pb) | | <0.15 | <0.28 | |
| | | | Selenium (Se) | | <0.75 | <1.4 | |
| | | | Silver (Ag) | | <0.15 | <0.28 | |
| 21-06-04596-011 | 110-A-11 | 06/30/2021 | 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 | --- | |
| 21-06-04596-012 | 110-A-12 | 06/30/2021 | Arsenic (As) | 740 | <0.15 | <0.21 | |
| | | | Barium (Ba) | | <0.15 | <0.21 | |
| | | | Cadmium (Cd) | | <0.030 | <0.041 | |
| | | | Chromium (Cr) | | <0.75 | <1.1 | |
| | | | Lead (Pb) | | <0.15 | <0.21 | |
| | | | Selenium (Se) | | <0.75 | <1.1 | |
| | | | Silver (Ag) | | <0.15 | <0.21 | |
| 21-06-04596-013 | 110-A-13 | 06/30/2021 | Arsenic (As) | 725 | <0.15 | <0.21 | |
| | | | Barium (Ba) | | <0.15 | <0.21 | |
| | | | Cadmium (Cd) | | <0.030 | <0.042 | |
| | | | Chromium (Cr) | | <0.75 | <1.1 | |
| | | | Lead (Pb) | | <0.15 | <0.21 | |
| | | | Selenium (Se) | | <0.75 | <1.1 | |
| | | | Silver (Ag) | | <0.15 | <0.21 | |
| 21-06-04596-014 | 110-A-14 | 06/30/2021 | Arsenic (As) | 725 | <0.15 | <0.21 | |

Client Number: 26-3514 Report Number: 21-06-04596

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/m³) | Narrative ID |
|---|---|---|---|---|---|---|---|
| | | | Barium (Ba) | | <0.15 | <0.21 | |
| | | | Cadmium (Cd) | | <0.030 | <0.042 | |
| | | | Chromium (Cr) | | <0.75 | <1.1 | |
| | | | Lead (Pb) | | <0.15 | <0.21 | |
| | | | Selenium (Se) | | <0.75 | <1.1 | |
| | | | Silver (Ag) | | <0.15 | <0.21 | |
| 21-06-04596-015 | 110-A-15 | 06/30/2021 | Arsenic (As) | 725 | <0.15 | <0.21 | |
| | | | Barium (Ba) | | <0.15 | <0.21 | |
| | | | Cadmium (Cd) | | <0.030 | <0.042 | |
| | | | Chromium (Cr) | | <0.75 | <1.1 | |
| | | | Lead (Pb) | | <0.15 | <0.21 | |
| | | | Selenium (Se) | | <0.75 | <1.1 | |
| | | | Silver (Ag) | | <0.15 | <0.21 | |
| 21-06-04596-016 | 110-A-16 | 06/30/2021 | Arsenic (As) | 725 | <0.15 | <0.21 | |
| | | | Barium (Ba) | | <0.15 | <0.21 | |
| | | | Cadmium (Cd) | | <0.030 | <0.042 | |
| | | | Chromium (Cr) | | <0.75 | <1.1 | |
| | | | Lead (Pb) | | <0.15 | <0.21 | |
| | | | Selenium (Se) | | <0.75 | <1.1 | |
| | | | Silver (Ag) | | <0.15 | <0.21 | |
| 21-06-04596-017 | 110-A-17 | 06/30/2021 | Arsenic (As) | 751 | <0.15 | <0.20 | |
| | | | Barium (Ba) | | <0.15 | <0.20 | |
| | | | Cadmium (Cd) | | <0.030 | <0.040 | |
| | | | Chromium (Cr) | | <0.75 | <1.0 | |
| | | | Lead (Pb) | | <0.15 | <0.20 | |

Client Number: 26-3514 Report Number: 21-06-04596

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/m³) | Narrative ID |
|---|---|---|---|---|---|---|---|
| | | | Selenium (Se) | | <0.75 | <1.0 | |
| | | | Silver (Ag) | | <0.15 | <0.20 | |
| 21-06-04596-018 | 110-A-18 | 06/30/2021 | Arsenic (As) | 778 | <0.15 | <0.20 | |
| | | | Barium (Ba) | | <0.15 | <0.20 | |
| | | | Cadmium (Cd) | | <0.030 | <0.039 | |
| | | | Chromium (Cr) | | <0.75 | <0.97 | |
| | | | Lead (Pb) | | <0.15 | <0.20 | |
| | | | Selenium (Se) | | <0.75 | <0.97 | |
| | | | Silver (Ag) | | <0.15 | <0.20 | |
| 21-06-04596-019 | 110-A-19 | 07/01/2021 | Arsenic (As) | 720 | <0.15 | <0.21 | |
| | | | Barium (Ba) | | <0.15 | <0.21 | |
| | | | Cadmium (Cd) | | <0.030 | <0.042 | |
| | | | Chromium (Cr) | | <0.75 | <1.1 | |
| | | | Lead (Pb) | | <0.15 | <0.21 | |
| | | | Selenium (Se) | | <0.75 | <1.1 | |
| | | | Silver (Ag) | | <0.15 | <0.21 | |
| 21-06-04596-020 | 110-A-20 | 07/01/2021 | Arsenic (As) | 732 | <0.15 | <0.21 | |
| | | | Barium (Ba) | | <0.15 | <0.21 | |
| | | | Cadmium (Cd) | | <0.030 | <0.041 | |
| | | | Chromium (Cr) | | <0.75 | <1.1 | |
| | | | Lead (Pb) | | <0.15 | <0.21 | |
| | | | Selenium (Se) | | <0.75 | <1.1 | |
| | | | Silver (Ag) | | <0.15 | <0.21 | |
| 21-06-04596-021 | 110-A-21 | 07/01/2021 | Arsenic (As) | 746 | <0.15 | <0.21 | |
| | | | Barium (Ba) | | <0.15 | <0.21 | |

# Environmental Hazards Services, L.L.C

Client Number: 26-3514 Report Number: 21-06-04596

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/m³) | Narrative ID |
|---|---|---|---|---|---|---|---|
| | | | Cadmium (Cd) | | <0.030 | <0.041 | |
| | | | Chromium (Cr) | | <0.75 | <1.1 | |
| | | | Lead (Pb) | | <0.15 | <0.21 | |
| | | | Selenium (Se) | | <0.75 | <1.1 | |
| | | | Silver (Ag) | | <0.15 | <0.21 | |
| 21-06-04596-022 | 110-A-22 | 07/01/2021 | 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 | --- | |

Sample Narratives:

Method: NIOSH 7300M

Analyst: Kailee Guthrie

Reviewed By Authorized Signatory: (b) (6)

*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. EHS sample results do not reflect blank correction. This report shall not be reproduced except in full, without the written consent of the Environmental Hazards Service, L.L.C. California Certification #2319 NY ELAP #11714.

LEGEND ug = microgram ug/m³ = micrograms per cubic meter

mL = milliliter L= Liters

# Metals Chain of Custody Form



| | | | |
|---|---|---|---|
| Company Name | Burns & McDonnell | Account # | 26-3514 |
| Company Address | 9400 Ward Parkway | City/State/Zip | Kansas City, MO 64114 |
| Phone | 314-302-4661 | Email | eaahlemeyer@burnsmcd.com |
| Project Name / Testing Address | GFCI 4300 Goodfellow Blvd | | |
| PO Number | 1087165 | Collected By | Emily Ahlemeyer & Ashley Anstaett |

Turn-Around Time: X 3 DAY ○ 2 DAY ○ 1 DAY ○ SAME DAY OR 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 (Mins.) | Flow Rate (L/min.) | Vol. Total Liters | WIPES: AREA (Circle The Unit of Measurement Used: cm or in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 110-A-01 | 6/23/21 0625 | | | | | | | | Ag, As, Ba, Cd, Cr, Pb, Se | | | | | | 205 | | 513 | x |
| 2 | 110-A-02 | 0626 | | | | | | | | | | | | | | 205 | | 513 | x |
| 3 | 110-A-03 | 0628 | | | | | | | | | | | | | | 205 | | 513 | x |
| 4 | 110-A-04 | 0628 | | | | | | | | | | | | | | 206 | | 515 | x |
| 5 | 110-A-05 | 0631 | | | | | | | | | | | | | | 204 | | 510 | x |
| 6 | 110-A-06 | 0632 | | | | | | | | | | | | | | 204 | | 530 | x |
| 7 | 110-A-07 | 0633 | | | | | | | | | | | | | | 203 | | 548 | x |
| 8 | 110-A-08 | 0635 | | | | | | | | | | | | | | 209 | | 523 | x |
| 9 | 110-A-09 | 0636 | | | | | | | | | | | | | | 209 | | 533 | x |
| 10 | 110-A-10 | 0637 | | | | | | | | | | | | | | 208 | | 541 | x |
| 11 | 110-A-11 | 1000 | | | | | | | | | | | | | | NA | NA | NA | x |
| 12 | 110-A-12 | 1015 | | | | | | | | | | | | | | 290 | | 740 | x |
| 13 | 110-A-13 | 1015 | | | | | | | | | | | | | | 290 | | 725 | x |
| 14 | 110-A-14 | 1016 | | | | | | | | | | | | | | 290 | | 725 | x |
| 15 | 110-A-15 | 1017 | | | | | | | | | | | | | | 290 | | 725 | x |

Released By: Emily Ahlemeyer Date: 6/25/21 Time: 1600

Signature: (b) (6) [redacted]

LAB USE ONLY – BELOW THIS LINE

Received By: TStone

Signature: (b) (6) [redacted]

Date: 6/29/21 Time: 12:54 ☐ AM ☒ PM

☐ Portal Contact Added

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

RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

21-06-04596

Due Date: 07/02/2021 (Friday)

EL MM-L

# Metals Chain of Custody Form



| | | | |
|---|---|---|---|
| Company Name | | Account # | |
| Company Address | | City/State/Zip | |
| Phone | 314-302-4001 | Email | |
| Project Name / Testing Address | GFC \| 4300 Goodfellow Blvd | | |
| PO Number | 105765 | Collected By | Emily Anlemeyer & Ashley Anstaett |
| Turn-Around Time | X 3 DAY ○ 2 DAY ○ 1 DAY ○ SAME DAY OR 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 (Mins.) | Flow Rate (L/min.) | Vol. (Total Liters) | WIPES: AREA (Circle The Unit of Measurement Used: cm or in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 110-A-16 | 6/23/21 1018 | | | | | | | | Ag, As, Ba, Cd, Cr, Pb, Se | | | | | | 290 | | 725 | x |
| 2 | 110-A-17 | 1019 | | | | | | | | | | | | | | 290 | | 751 | x |
| 3 | 110-A-18 | 1021 | | | | | | | | | | | | | | 289 | | 778 | x |
| 4 | 110-A-19 | 1022 | | | | | | | | | | | | | | 288 | | 720 | x |
| 5 | 110-A-20 | 1024 | | | | | | | | | | | | | | 287 | | 732 | x |
| 6 | 110-A-21 | 1025 | | | | | | | | | | | | | | 287 | | 746 | x |
| 7 | 110-A-22 | 1000 | | | | | | | | | | | | | | NA | NA | NA | x |
| 8 | | | | | | | | | | | | | | | | | | | x |
| 9 | | | | | | | | | | | | | | | | | | | x |
| 10 | | | | | | | | | | | | | | | | | | | x |
| 11 | | | | | | | | | | | | | | | | | | | x |
| 12 | | | | | | | | | | | | | | | | | | | x |
| 13 | | | | | | | | | | | | | | | | | | | x |
| 14 | | | | | | | | | | | | | | | | | | | x |
| 15 | | | | | | | | | | | | | | | | | | | x |

Released By: Emily Anlemeyer Date: 6/25/21 Time: 1600

Signature: (b) (6)

LAB USE ONLY – BELOW THIS LINE

Received By: Stone

Signature: (b) (6)

Date: 6/29/21 Time: 12:54 ☐ AM ☑ PM

☐ Portal Contact Added

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

RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

4596

EHS Laboratories

Attach Laboratory Label Here