



February 23, 2022

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 105 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 warehouse on the first floor of building 105 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 semiannual report titled *Goodfellow Federal Center – Metals in Settled Dust Sampling – Building 105*, dated January 12, 2022.

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 sample(s) were collected on January 26, 2022 and February 11, 2022 by Emily Pulcher of Burns & McDonnell. Two (2) air samples were collected on January 26, 2022. Lead was detected at 1.3 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in sample 105-A-01, collected from a shelf near the mail workstation at column D43 in the warehouse of building 105.

Four (4) wipe samples were collected on January 26, 2022. The sample locations and results are listed below. The complete wipe sampling laboratory report from EHS is included in Appendix B.

- Stainless steel mail workstation at column D43 in the warehouse of building 105
 - Arsenic, selenium, and silver were below laboratory reporting limits
 - Barium was detected at 0.83 micrograms per square foot ($\mu\text{g}/\text{sq. ft}$), below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Cadmium was detected at 0.20 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 31 $\mu\text{g}/\text{sq. ft}$
 - Chromium was detected at 2.4 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Lead was detected at 0.59 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 10 $\mu\text{g}/\text{sq. ft}$

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- Empty table outside of the walk-in cooler at column E43 in the warehouse of building 105
 - Arsenic, chromium, selenium and silver were below laboratory reporting limits
 - Barium was detected at 1.5 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Cadmium was detected at 0.62 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 31 $\mu\text{g}/\text{sq. ft}$
 - Lead was detected at 0.62 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 10 $\mu\text{g}/\text{sq. ft}$
- Mid-shelf, back wall of storage rack at column H46 in the warehouse of building 105
 - Arsenic, selenium, and silver were below laboratory reporting limits
 - Barium was detected at 22 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Cadmium was detected at 0.45 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 31 $\mu\text{g}/\text{sq. ft}$
 - Chromium was detected at 3.4 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Lead was detected at 6.5 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 10 $\mu\text{g}/\text{sq. ft}$
- Top shelf of tape organizer at column E47 in the warehouse of building 105
 - Arsenic, selenium, and silver were below the laboratory reporting limits
 - Barium was detected at 86 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Cadmium was detected at 0.60 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 31 $\mu\text{g}/\text{sq. ft}$
 - Chromium was detected at 5.0 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Lead was detected at 47 $\mu\text{g}/\text{sq. ft}$, exceeding the clean area limit of 10 $\mu\text{g}/\text{sq. ft}$

One (1) air sample was collected on February 11, 2022 from the top of the yellow cage cart located at column F47. All analytes were below laboratory reporting limits. The complete air sampling laboratory report from EHS is included in Appendix A.



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Two (2) wipe samples were collected on February 11, 2022. The sample locations and results are listed below. The complete wipe sampling laboratory report from EHS is included in Appendix B.

- Top of cardboard box on the pallet south of column E46 in the warehouse of building 105
 - Arsenic, selenium, and silver were below the laboratory reporting limits
 - Barium was detected at 22 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Cadmium was detected at 0.54 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 31 $\mu\text{g}/\text{sq. ft}$
 - Chromium was detected at 4.0 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Lead was detected at 11 $\mu\text{g}/\text{sq. ft}$, exceeding the clean area limit of 10 $\mu\text{g}/\text{sq. ft}$
- Top of metal rolling cart, southeast end of cage near wire closet in the warehouse of building 105
 - Arsenic, selenium, and silver were below the laboratory reporting limits
 - Barium was detected at 26 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Cadmium was detected at 0.80 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 31 $\mu\text{g}/\text{sq. ft}$
 - Chromium was detected at 5.2 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 3,094 $\mu\text{g}/\text{sq. ft}$
 - Lead was detected at 9.9 $\mu\text{g}/\text{sq. ft}$, below the clean area limit of 10 $\mu\text{g}/\text{sq. ft}$

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 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 Czarnecki
Facilities Management Division
February 23, 2022
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Sincerely,

(b) (6)

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

Matt Shanahan, CHMM
Project Manager

Attachments:

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

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 REPORTS



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: 22-01-04032
Received Date: 01/28/2022
Reported Date: 02/21/2022

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
22-01-04032-001	105-A-01	02/18/2022	Arsenic (As)	689	<0.15	<0.22	
			Barium (Ba)		<0.15	<0.22	
			Cadmium (Cd)		<0.030	<0.044	
			Chromium (Cr)		<0.75	<1.1	
			Lead (Pb)		0.87	1.3	
			Selenium (Se)		<0.75	<1.1	
			Silver (Ag)		<0.15	<0.22	
22-01-04032-002	105-A-02	02/18/2022	Arsenic (As)	658	<0.15	<0.23	
			Barium (Ba)		<0.15	<0.23	
			Cadmium (Cd)		<0.030	<0.046	
			Chromium (Cr)		<0.75	<1.2	
			Lead (Pb)		<0.15	<0.23	
			Selenium (Se)		<0.75	<1.2	
			Silver (Ag)		<0.15	<0.23	

ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

Pg 1 of 1

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	Emily Pulcher
Turn-Around Time	<input checked="" type="radio"/> 5 DAY <input type="radio"/> 3 DAY <input type="radio"/> 2 DAY <input type="radio"/> 1 DAY <input type="radio"/> SAME DAY OR WEEKEND - Must Call Ahead		

LAB NUMBER	Client Sample ID	Collection Date & Time	METALS						Other Metals	PARTICULATES					AIR			WIPES
			Pb TCLP	TCLP RCRA 8	RCRA 8 Total	Toxic Metal Profile	Welding Fume Profile	TX 11 TCLP		CA17 Total	Total Nuisance Dust	Respirable Dust	TSP Gravimetric	TSP Pb	PM-10	Total Time Mins.	Flow Rate L/min.	Vol. Total Liters
1	105-A-01	1/26/22 0915							Ag, As, Ba, Cd, Cr, Pb, Se						265	2.6	689	x
2	105-A-02	0917													263	2.5	658	x
3	105-W-01	1342																12 x 12
4	105-W-02	1345																12 x 12
5	105-W-03	1348																12 x 12
6	105-W-04	1355																12 x 12
7	105-W-05	1355																NA x NA
8																		x
9																		x
10																		x
11																		x
12																		x
13																		x
14																		x
15																		x

Released By:	Emily Pulcher	Date:	1/26/22	Time:	1600
Signature:	(b) (6)				

LAB USE ONLY – BELOW THIS LINE

Received By: T. Tolman

Signature: (b) (6)

Date: 1/28/22 Time: 12:30p AM PM

Portal Contact Added

7469 WHITEPINE RD, RICHMOND, VA 23237 (800)-347-4010
 RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

22-01-04032

Due Date:
02/04/2022
(Friday)
EL MM-L



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: 22-02-02235
Received Date: 02/14/2022
Reported Date: 02/21/2022

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
22-02-02235-001	105-A-01	02/18/2022	Arsenic (As)	798	<0.15	<0.19	
			Barium (Ba)		<0.15	<0.19	
			Cadmium (Cd)		<0.030	<0.038	
			Chromium (Cr)		<0.75	<0.94	
			Lead (Pb)		<0.15	<0.19	
			Selenium (Se)		<0.75	<0.94	
			Silver (Ag)		<0.15	<0.19	
22-02-02235-002	105-A-02	02/18/2022	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: 22-02-02235

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
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Sample Narratives:

Method: NIOSH 7300M
Analyst: Ailea Cabatbat

(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. NY ELAP #11714.

LEGEND ug = microgram ug/m³ = micrograms per cubic meter
 mL = milliliter L= Liters

ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

Pg 1 of 1

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		Emily Pulcher										
Turn-Around Time		<input type="radio"/> 5 DAY <input checked="" type="radio"/> 3 DAY <input type="radio"/> 2 DAY <input type="radio"/> 1 DAY <input type="radio"/> SAME DAY OR WEEKEND - Must Call Ahead																
LAB NUMBER	Client Sample ID	Collection Date & Time	METALS						Other Metals	PARTICULATES					AIR			WIPES
			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.
1	105-A-01	2/11/22 0828						Ag, As, Ba, Cd, Cr, Pb, Se						307	2.6	798	x	
2	105-A-02	2/11/22 0759						I						NA	NA	NA	x	
3																		x
4	105-W-01	2/11/22 0830																12 x 12
5	105-W-02	2/11/22 0836																12 x 12
6																		x
7																		x
8																		x
9																		x
10																		x
11																		x
12																		x
13																		x
14																		x
15																		x
Released By:		Emily Pulcher				Date:			2/11/22		Time:		1600					
Signature:		(b) (6)																

LAB USE ONLY – BELOW THIS LINE

Received By: T Stone
 Signature: (b) (6)
 Date: 2/14/22 Time: 1:35 AM PM

Portal Contact Added

7469 WHITEPINE RD, RICHMOND, VA 23237 (800)-347-4010
 RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

22-02-02235

Due Date:
02/17/2022
(Thursday)
EL MM-L

APPENDIX B – WIPE SAMPLING LABORATORY REPORTS



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: 22-01-04035

Received Date: 01/28/2022

Analyzed Date: 02/18/2022

Reported Date: 02/21/2022

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	Analyte:	Wipe Area (ft ²)	Total Metal (ug)	Concentration (ug/ft ²)	Narrative ID
22-01-04035-001	105-W-01	Arsenic (As)	1.00	<2.50	<2.5	L01
		Barium (Ba)	1.00	0.830	0.83	L01
		Cadmium (Cd)	1.00	0.195	0.20	L01
		Chromium (Cr)	1.00	2.44	2.4	L01
		Lead (Pb)	1.00	0.590	0.59	L01
		Selenium (Se)	1.00	<2.50	<2.5	L01
		Silver (Ag)	1.00	<0.500	<0.50	L01
22-01-04035-002	105-W-02	Arsenic (As)	1.00	<2.50	<2.5	L01
		Barium (Ba)	1.00	1.46	1.5	L01
		Cadmium (Cd)	1.00	0.620	0.62	L01
		Chromium (Cr)	1.00	<1.00	<1.0	L01

Environmental Hazards Services, L.L.C

Client Number: 26-3514

Report Number: 22-01-04035

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

Lab Sample Number	Client Sample Number	Analyte:	Wipe Area (ft ²)	Total Metal (ug)	Concentration (ug/ft ²)	Narrative ID
		Lead (Pb)	1.00	0.620	0.62	L01
		Selenium (Se)	1.00	<2.50	<2.5	L01
		Silver (Ag)	1.00	<0.500	<0.50	L01
22-01-04035-003	105-W-03	Arsenic (As)	1.00	<2.50	<2.5	L01
		Barium (Ba)	1.00	22.2	22	L01
		Cadmium (Cd)	1.00	0.450	0.45	L01
		Chromium (Cr)	1.00	3.44	3.4	L01
		Lead (Pb)	1.00	6.50	6.5	L01
		Selenium (Se)	1.00	<2.50	<2.5	L01
		Silver (Ag)	1.00	<0.500	<0.50	L01
22-01-04035-004	105-W-04	Arsenic (As)	1.00	<2.50	<2.5	L01
		Barium (Ba)	1.00	86.4	86	L01
		Cadmium (Cd)	1.00	0.595	0.60	L01
		Chromium (Cr)	1.00	4.95	5.0	L01
		Lead (Pb)	1.00	46.9	47	L01
		Selenium (Se)	1.00	<2.50	<2.5	L01
		Silver (Ag)	1.00	<0.500	<0.50	L01
22-01-04035-005	105-W-05	Arsenic (As)		<2.50	---	L01
		Barium (Ba)		<0.500	---	L01

Environmental Hazards Services, L.L.C

Client Number: 26-3514

Report Number: 22-01-04035

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

Lab Sample Number	Client Sample Number	Analyte:	Wipe Area (ft ²)	Total Metal (ug)	Concentration (ug/ft ²)	Narrative ID
		Cadmium (Cd)		<0.100	---	L01
		Chromium (Cr)		<1.00	---	L01
		Lead (Pb)		<0.500	---	L01
		Selenium (Se)		<2.50	---	L01
		Silver (Ag)		<0.500	---	L01

Sample Narratives:

L01: MB for Se exceeded acceptance limit.

Analyst: Ailea Cabatbat

Method: Mercury (Hg): EPA SW846 7471B

All other metals: EPA SW846 3050B/6010D

Reviewed By Authorized Signatory:

(b) (6)

Melissa Kanode

QA/QC Clerk

Sample Results denoted with a "less than" (<) sign contains less than the reporting limit for each particular metal, based on a 50mL volume. The reporting limit for Cadmium is 0.10ug, Barium, Lead and Silver are 0.50ug, Arsenic and Chromium are 1.0ug, and Selenium is 2.5ug.

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. NY ELAP #11714.

Legend ug = microgram ug/ft² = micrograms per square foot
 mL = milliliter ft² = square foot

ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

Pg 1 of 1

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	Emily Pulcher
Turn-Around Time	<input checked="" type="radio"/> 5 DAY <input type="radio"/> 3 DAY <input type="radio"/> 2 DAY <input type="radio"/> 1 DAY <input type="radio"/> SAME DAY OR WEEKEND - Must Call Ahead		

LAB NUMBER	Client Sample ID	Collection Date & Time	METALS							Other Metals <small>Ag, As, Ba, Cd, Cr, Pb, Se</small>	PARTICULATES					AIR			WIPES
			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.	AREA <small>Circle The Unit of Measurement Used</small> cm or <input checked="" type="radio"/> in
																Mins.	L/min.	Total Liters	
1	105-A-01	1/26/22 0915							Ag, As, Ba, Cd, Cr, Pb, Se						265	2.4	689	x	
2	105-A-02	1/26/22 0917							I						263	2.5	658	x	
3	105-W-01	1/26/22 1342																12 x 12	
4	105-W-02	1/26/22 1345																12 x 12	
5	105-W-03	1/26/22 1348																12 x 12	
6	105-W-04	1/26/22 1355																12 x 12	
7	105-W-05	1/26/22 1355															NA x NA		
8																	x		
9																	x		
10																	x		
11																	x		
12																	x		
13																	x		
14																	x		
15																	x		

Released By: Emily Pulcher	Date: 1/26/22	Time: 1600
Signature: (b) (6)		

LAB USE ONLY - BELOW THIS LINE


Received By: T. [Signature]

Signature: (b) (6)

Date: 1/28/22 Time: 12:30 AM PM

Portal Contact Added

22-01-04035



Due Date:
02/04/2022
(Friday)
EL MM-L



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: 22-02-02236

Received Date: 02/14/2022

Analyzed Date: 02/19/2022

Reported Date: 02/21/2022

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	Analyte:	Wipe Area (ft ²)	Total Metal (ug)	Concentration (ug/ft ²)	Narrative ID
22-02-02236-001	105-W-01	Arsenic (As)	1.00	<2.50	<2.5	L01
		Barium (Ba)	1.00	21.8	22	L01
		Cadmium (Cd)	1.00	0.545	0.54	L01
		Chromium (Cr)	1.00	4.00	4.0	L01
		Lead (Pb)	1.00	10.8	11	L01
		Selenium (Se)	1.00	<2.50	<2.5	L01
		Silver (Ag)	1.00	<0.500	<0.50	L01
22-02-02236-002	105-W-02	Arsenic (As)	1.00	<2.50	<2.5	L01
		Barium (Ba)	1.00	26.1	26	L01
		Cadmium (Cd)	1.00	0.800	0.80	L01
		Chromium (Cr)	1.00	5.15	5.2	L01

Environmental Hazards Services, L.L.C

Client Number: 26-3514

Report Number: 22-02-02236

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

Lab Sample Number	Client Sample Number	Analyte:	Wipe Area (ft ²)	Total Metal (ug)	Concentration (ug/ft ²)	Narrative ID
		Lead (Pb)	1.00	9.86	9.9	L01
		Selenium (Se)	1.00	<2.50	<2.5	L01
		Silver (Ag)	1.00	<0.500	<0.50	L01

Sample Narratives:

L01: LCS and LCSD percent recoveries for Se were outside of acceptable control limits.

Analyst: Ailea Cabatbat

Method: Mercury (Hg): EPA SW846 7471B

All other metals: 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 for each particular metal, based on a 50mL volume. The reporting limit for Cadmium is 0.10ug, Barium, Lead and Silver are 0.50ug, Arsenic and Chromium are 1.0ug, and Selenium is 2.5ug.

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. NY ELAP #11714.

Legend ug = microgram ug/ft² = micrograms per square foot
 mL = milliliter ft² = square foot

ENVIRONMENTAL HAZARDS SERVICES, LLC

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		eapulcher@burnsmcd.com									
Project Name / Testing Address		GFC / 4300 Goodfellow Blvd															
PO Number		168765				Collected By		Emily Pulcher									
Turn-Around Time		<input type="radio"/> 5 DAY <input checked="" type="radio"/> 3 DAY <input type="radio"/> 2 DAY <input type="radio"/> 1 DAY <input type="radio"/> SAME DAY OR WEEKEND - Must Call Ahead															
LAB NUMBER	Client Sample ID	Collection Date & Time	METALS						Other Metals	PARTICULATES			AIR			WIPES AREA Circle The Unit of Measurement Used cm or <input type="checkbox"/> in	
			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 Mins.
1	105-A-01	2/11/22 0828						Ag, As, Ba, Cd, Cr, Pb, Se						307	2.6	798	x
2	105-A-02	2/11/22 0759						I						NA	NA	NA	x
3																	x
4	105-W-01	2/11/22 0830															12 x 12
5	105-W-02	2/11/22 0836															12 x 12
6																	x
7																	x
8																	x
9																	x
10																	x
11																	x
12																	x
13																	x
14																	x
15																	x
Released By:		Emily Pulcher				Date:			2/11/22		Time:		1600				
Signature:		(b) (6)															


LAB USE ONLY – BELOW THIS LINE

Received By: T Stone
 Signature: (b) (6)
 Date: 2, 14, 22 Time: 1:35 AM PM

Portal Contact Added

7469 WHITEPINE RD, RICHMOND, VA 23237 (800)-347-4010
 RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

22-02-02236



Due Date:
02/21/2022
(Monday)
EL MM-L