



December 09, 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
Metals in Settled Dust Sampling – Bathrooms in Occupied Areas
Project No. 121244

Dear Ms. Czarnecki:

Thank you for the opportunity to assist the General Services Administration (GSA) with the metals in settled dust sampling investigation at the Goodfellow Federal Center (GFC) in St. Louis, Missouri. Burns & McDonnell understands that the purpose of the investigation was to provide additional sampling data of existing environmental conditions that are present at the 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.

INTRODUCTION

Per historical use and previous characterization, Burns & McDonnell was contracted to perform settled dust sampling for the analysis of lead from restrooms located in occupied areas of buildings. The purpose of this testing was to characterize the presence and concentration of target metals in these locations.

The proposed sampling plan, the number of samples, the sample distribution and general methodology were developed by GSA and Burns & McDonnell. Settled dust wipe sampling was conducted on October 21, 2021 by Ashley Anstaett of Burns & McDonnell and October 27, 2021 by Jeff Smith of OCCU-TEC.

METALS IN SETTLED DUST SAMPLING

Metals in settled dust sampling was conducted primarily within restrooms located in tenant-occupied areas. 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.

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Dust wipe sampling for the lead 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), where feasible, 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. Dust wipe samples were submitted to Environmental Hazards Services, LLC (EHS) in Richmond, Virginia for Flame Atomic Absorption (Flame AA) analysis of metals using Environmental Protection Agency (EPA) method SW846-3050B/7000B or Inductively Coupled Plasma (ICP) analysis of metals using Environmental Protection Agency (EPA) method SW846 3050B/6010D, depending on sampled surface area. EHS is accredited under the American Industrial Hygiene Association (AIHA) Laboratory Accreditation Program (LAP) identification number LAP-100420.

Whereas the Occupational Safety and Health Administration (OSHA) has not established regulatory limits for surface concentrations of metals, the OSHA Technical Manual Section II: Chapter 2 (III.A) describes a method for calculating “housekeeping” standards, as recommended acceptable surface limits. Brookhaven’s IH75190 procedure uses the housekeeping standards to derive a lower, “clean area limit” for non-operational areas that can be accessed or contacted without special training or precautions. Wipe results were compared to the Brookhaven procedure’s clean area limits for each metal.

Results of the dust wipe samples collected indicate that five (5) of the thirty-five (35) samples contained concentrations of lead above laboratory reporting limits. The following table identifies the range of results for lead samples that were analyzed. Samples with a “<” sign indicate that the results were below the lab’s reportable limit.

Table 1. Summary of Dust Wipe Results

Analyte	Lowest Concentration ^(a) (µg/sq. ft) ^(b)	Highest Concentration ^(a) (µg/sq. ft) ^(b)	Clean Area Limit ^{(c)(d)} µg/sq. ft ^(b)
Lead	<0.50	<6.90	10

- (a) Samples with a “<” sign indicate that the results were below the reportable limit.
- (b) µg/sq. ft = micrograms per square foot of surface area.
- (c) Clean Area Limit per Brookhaven IH75190=OSHA Housekeeping Limit $[[PEL (\mu\text{g}/\text{m}^3) \times 10 \text{ m}^3/100\text{cm}^2] \times 929\text{cm}^2/\text{sq. ft.}] / 15$.
- (d) Lead clean area limit: Brookhaven references EPA/HUD limit for floors, set at 10 µg/sq. ft. as of January 2020.



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Of the 5 samples that had detectable levels of lead, no samples exceeded the clean area limit.

Burns & McDonnell appreciates the opportunity to work with the GSA 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)

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 – Sample Summary Table

Appendix B – Laboratory Analysis 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 – SAMPLE SUMMARY TABLE

Appendix A
Wipe Sample Summary Table

Sample Number	Location	Area Description	Analyte	Result	Units	Clean Area Limit*
102E-W-01	Building 102E, N Lobby, Women's Restroom	Interior door handle	Lead	< 0.71	µg/ft ²	10
102E-W-02	Building 102E, N Lobby, Women's Restroom	Perimeter of stand alone sink	Lead	< 1.30	µg/ft ²	10
102E-W-03	Building 102E, N Lobby, Women's Restroom	Top of toilet paper dispenser in 1st stall	Lead	< 0.69	µg/ft ²	10
103D-W-01	Building 103D, 1st floor, Health Clinic	Staff restroom, sink perimeter	Lead	< 0.67	µg/ft ²	10
103D-W-02	Building 103D, 1st floor, Health Clinic	Handle bar by toilet, below toilet paper dispenser	Lead	1.2	µg/ft ²	10
103D-W-03	Building 103D, 1st floor, Health Clinic	Top of paper towel dispenser	Lead	< 0.50	µg/ft ²	10
103-W-01	Building 103, 1st floor	Men's restroom, column B33, counter	Lead	< 0.50	µg	10
103-W-02	Building 103, 1st floor	Men's restroom, column B33, top of toilet paper dispenser, handicap stall	Lead	3.3	µg/ft ²	10
103E-W-01	Building 103E, 1st floor, N Lobby, Women's Restroom	Wood shelf below mirror	Lead	1.6	µg/ft ²	10
103E-W-02	Building 103E, 1st floor, N Lobby, Women's Restroom	Perimeter of stand alone sink	Lead	< 0.67	µg/ft ²	10
103E-W-03	Building 103E, 1st floor, N Lobby, Women's Restroom	Top of toilet paper dispenser, handicap stall	Lead	1.1	µg/ft ²	10
105E-W-03	Building 105E, 1st floor, Men's Restroom	Top of toilet paper dispenser in 1st stall	Lead	< 0.69	µg/ft ²	10
104E-W-01	Building 104E, 2nd Floor, Women's Restroom	Surface of counter	Lead	< 0.50	µg/ft ²	10

Appendix A
Wipe Sample Summary Table

Sample Number	Location	Area Description	Analyte	Result	Units	Clean Area Limit*
104E-W-02	Building 104E, 2nd Floor, Women's Restroom	Interior door handle	Lead	< 0.83	µg/ft ²	10
104E-W-03	Building 104E, 2nd Floor, Women's Restroom	Top of toilet paper dispenser in stall	Lead	< 0.69	µg/ft ²	10
110-W-01	Building 110, (b) Office, Men's Restroom	Interior door handle	Lead	< 0.83	µg/ft ²	10
110-W-02	Building 110, (b) Office, Men's Restroom	Top of toilet paper dispenser in stall	Lead	< 0.69	µg/ft ²	10
110-W-03	Building 110, (b) Office, Men's Restroom	Hand rail in handicap stall	Lead	< 0.53	µg/ft ²	10
107-W-01	Building 107, 1st floor, Women's Restroom	Interior door handle	Lead	< 0.94	µg/ft ²	10
107-W-02	Building 107, 1st floor, Women's Restroom	Surface of counter	Lead	< 0.50	µg/ft ²	10
107-W-03	Building 107, 1st floor, Women's Restroom	Top of toilet paper dispenser in stall	Lead	< 0.69	µg/ft ²	10
107-W-04	Building 107, 1st floor, Women's Restroom	Field Blank	Lead	< 0.500	µg	--
106-W-01	Building 106, Men's Restroom	Stand alone sink perimeter	Lead	2.2	µg/ft ²	10
106-W-02	Building 106, Men's Restroom	Hand railing next to toilet	Lead	< 0.53	µg/ft ²	10
105E-W-01	Building 105E, 1st floor, North Lobby, Women's Restroom	Surface of counter	Lead	< 5.00	µg/ft ²	10
105E-W-02	Building 105E, 1st floor, North Lobby, Men's Restroom	Top of trash can	Lead	< 5.00	µg	10
104-W-01	Building 104, 2nd floor, North Men's Restroom	Surface of counter	Lead	< 5.00	µg/ft ²	10

Appendix A
Wipe Sample Summary Table

Sample Number	Location	Area Description	Analyte	Result	Units	Clean Area Limit*
104-W-02	Building 104, 2nd floor, Men's Restroom, column B43	Surface of counter	Lead	< 5.00	µg/ft ²	10
104-W-03	Building 104, 2nd floor, Men's Restroom, column B18	East radiator	Lead	< 5.00	µg/ft ²	10
104-W-04	Building 104, 2nd floor, Women's Restroom, column C4	Paper towel dispenser	Lead	< 9.0	µg/ft ²	10
105-W-01	Building 105, 2nd floor, Men's Restroom, Column I10	West radiator cover	Lead	< 5.00	µg/ft ²	10
105-W-02	Building 105, 1st floor, Men's Restroom	Mirror sill	Lead	< 6.90	µg/ft ²	10
105-W-03	Building 105, 1st floor, Men's Restroom, Column B44	Stainless steel sink/mirror sill	Lead	< 5.15	µg/ft ²	10
105-W-04	Building 105, 2nd floor, Men's Restroom, Column B18	Hand rail in handicap stall	Lead	< 5.11	µg/ft ²	10
105-W-05	Field Blank	--	Lead	< 5.00	µg	--

* Clean Area Limit per Brookhaven IH75190=OSHA Housekeeping Limit $[[PEL (\mu\text{g}/\text{m}^3) \times 10 \text{ m}^3/100\text{cm}^2] \times 929\text{cm}^2/\text{sq. ft.}] / 15$. Lead clean area limit: Brookhaven references EPA/HUD limit for floors, set at 10 µg/sq. ft. as of January 2020.
 µg/ft² - micrograms per square foot

APPENDIX B – LABORATORY ANALYSIS 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: 21-11-04148

Received Date: 11/23/2021

Analyzed Date: 11/30/2021

Reported Date: 11/30/2021

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	Analyte:	Wipe Area (ft ²)	Total Metal (ug)	Concentration (ug/ft ²)	Narrative ID
21-11-04148-001	102E-W-01	Lead (Pb)	0.708	<0.500	<0.71	
21-11-04148-002	102E-W-02	Lead (Pb)	0.375	<0.500	<1.3	
21-11-04148-003	102E-W-03	Lead (Pb)	0.729	<0.500	<0.69	
21-11-04148-004	103D-W-01	Lead (Pb)	0.750	<0.500	<0.67	
21-11-04148-005	103D-W-02	Lead (Pb)	1.25	1.54	1.2	
21-11-04148-006	103D-W-03	Lead (Pb)	1.00	<0.500	<0.50	
21-11-04148-007	103-W-01	Lead (Pb)	1.00	<0.500	<0.50	
21-11-04148-008	103-W-02	Lead (Pb)	0.375	1.25	3.3	
21-11-04148-009	103E-W-01	Lead (Pb)	1.00	1.58	1.6	
21-11-04148-010	103E-W-02	Lead (Pb)	0.750	<0.500	<0.67	
21-11-04148-011	103E-W-03	Lead (Pb)	0.729	0.780	1.1	

Environmental Hazards Services, L.L.C

Client Number: 26-3514

Report Number: 21-11-04148

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
21-11-04148-012	105E-W-03	Lead (Pb)	0.729	<0.500	<0.69	
21-11-04148-013	104E-W-01	Lead (Pb)	1.00	<0.500	<0.50	
21-11-04148-014	104E-W-02	Lead (Pb)	0.600	<0.500	<0.83	
21-11-04148-015	104E-W-03	Lead (Pb)	0.729	<0.500	<0.69	
21-11-04148-016	110-W-01	Lead (Pb)	0.600	<0.500	<0.83	
21-11-04148-017	110-W-02	Lead (Pb)	0.729	<0.500	<0.69	
21-11-04148-018	110-W-03	Lead (Pb)	0.938	<0.500	<0.53	
21-11-04148-019	107-W-01	Lead (Pb)	0.533	<0.500	<0.94	
21-11-04148-020	107-W-02	Lead (Pb)	1.00	<0.500	<0.50	
21-11-04148-021	107-W-03	Lead (Pb)	0.729	<0.500	<0.69	
21-11-04148-022	107-W-04	Lead (Pb)		<0.500	---	
21-11-04148-023	106-W-01	Lead (Pb)	0.750	1.66	2.2	
21-11-04148-024	106-W-02	Lead (Pb)	0.938	<0.500	<0.53	

Environmental Hazards Services, L.L.C

Client Number: 26-3514

Report Number: 21-11-04148

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
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Sample Narratives:

Analyst: Kailee Guthrie

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/ft ² = micrograms per square foot
	mL = milliliter	ft ² = 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	eaahlemeyer@burnsmcd.com
Project Name / Testing Address: GFC / 4300 Goodfellow Blvd			
PO Number	168765	Collected By	Ashley Anstett
Turn-Around Time	<input checked="" type="checkbox"/> 3 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 1 DAY <input type="checkbox"/> SAME DAY OR WEEKEND - Must Call Ahead		

LAB NUMBER	Client Sample ID	Collection Date & Time	METALS						Other Metals (ICP)	PARTICULATES				AIR			WIPES AREA Circle The Unit of Measurement Used cm or (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.		Flow Rate L/min.
1	1026-W-01	10/21/21 1025							Lead									12 x 8.5
2	1026-W-02	1033																18 x 3
3	1026-W-03	1035																21 x 5
4	103D-W-01	1040																9 x 12
5	103D-W-02	1048																45 x 4
6	103D-W-03	1051																12 x 12
7	103-W-01	1058																12 x 12
8	103-W-02	1100																18 x 3
9	1036-W-01	1117																12 x 12
10	1036-W-02	1100																9 x 12
11	1036-W-03	1122																21 x 5
12	104-W-01	1150																12 x 12
13	104-W-02	1153																7.2 x 12
14	104-W-03	1155																21 x 5
15	104-W-04	1158																45 x 4

Do Not Analyze

Released By: Ashley Anstett	Date: 10/22/21	Time: 1430
Signature: (b) (6)		

LAB USE ONLY - BELOW THIS LINE

Received By: TStone
 Signature: _____
 Date: 10/25/21 Time: 4:46 AM PM

Portal Contact Added

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

21-11-04148

Due Date:
11/30/2021
(Tuesday)
EL MM-L

ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

Pg 2 of 3

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		GFC / 4300 Goodfellow Blvd							
PO Number		168765			Collected By		Ashley Anstaeff		
Turn-Around Time		<input checked="" type="checkbox"/> 3 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 1 DAY <input type="checkbox"/> SAME DAY OR WEEKEND - Must Call Ahead							

LAB NUMBER	Client Sample ID	Collection Date & Time	METALS							Other Metals (LOP)	PARTICULATES					AIR			WIPES AREA Circle The Unit of Measurement Used cm or (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.	Flow Rate L/min.	Vol. Total Liters	
1	1054-W-01	10/21/21 1215							Do not lead analytic									12 x 12	
2	1054-W-02	1218																7.2 x 12	
3	1054-W-03	1220																21 x 12	
4	105-W-01	1225							Samples not REC (S) 11/23/21								NA x NA		
5	105-W-02	1230																NA x NA	
6	105-W-03	1232																7.2 x 12	
7	105-W-04	1234																9 x 12	
8	105-W-05	1236																21 x 5	
9	1044-W-01	1344																12 x 12	
10	1044-W-02	1346																7.2 x 12	
11	1044-W-03	1350																21 x 5	
12	110-W-01	1407																7.2 x 12	
13	110-W-02	1409																21 x 5	
14	110-W-03	1412																45 x 3	
15	107-W-01	1455																6.4 x 12	

Released By:	Ashley Anstaeff	Date:	10/22/21	Time:	1430
Signature:	(b) (6)				


LAB USE ONLY - BELOW THIS LINE

Received By: T Stone
 Signature: (b) (6)
 Date: 10/25/21 Time: 4:46 AM PM

Portal Contact Added

7469 WHITEPINE RD, RICHMOND, VA 23237 (800)-347-4010
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ENVIRONMENTAL HAZARDS SERVICES, LLC

Metals Chain of Custody Form

Pg 3 of 3

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		GFC / 4300 Goodfellow Blvd							
PO Number		168765			Collected By		Ashley Anstaeff		
Turn-Around Time		<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 (TCLP)	PARTICULATES					AIR			WIPES AREA Circle The Unit of Measurement Used cm or <input checked="" type="radio"/> 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.	Flow Rate L/min.	
1	107-W-02	10/21/21 1457							Lead									12 x 12
2	107-W-03	1459																21 x 5
3	107-W-04	1500																NA x NA
4	108-W-01	1525																9 x 12
5	108-W-02	1527																45 x 3
6																		x
7																		x
8																		x
9																		x
10																		x
11																		x
12																		x
13																		x
14																		x
15																		x

Released By:	Ashley Anstaeff	Date:	10/22/21	Time:	14:30
Signature:	(b) (6)				

LAB USE ONLY - BELOW THIS LINE

Received By: TS Stone
 Signature: (b) (6)
 Date: 10/25/21 Time: 4:46 AM PM

Portal Contact Added

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 RESULTS VIA CLIENT PORTAL AVAILABLE @ www.leadlab.com

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Tiffany Stone

From: Anstaett, Ashley L [alanstaett@burnsmcd.com]
Sent: Monday, November 22, 2021 4:56 PM
To: Tiffany Stone; Wenger, Eric
Cc: Ahlemeyer, Emily A; Shanahan, Matthew; 'Jeff Smith'
Subject: RE: Issues with Samples Received Today for Goodfellow Blvd Project-COC Attached for Your Review

Hi Tiffany,

Thank you so much for all of your help!

For the samples pending analysis, please do not run the following samples:

- 105E-W-01
- 105E-W-02
- 104-W-01 through 104-W-05

So there are a total of 11 samples to be removed from analysis (due to the two series with the 104 label).

Please run the remaining samples using ICP.

Thank you so much again!

Ashley Anstaett \ Burns & McDonnell
Environmental Consultant
o 314-501-1467 \ m 636-233-1270
alanstaett@burnsmcd.com \ burnsmcd.com

From: Tiffany Stone <tiffany@leadlab.com>
Sent: Monday, November 22, 2021 3:24 PM
To: 'Tiffany Stone' <tiffany@leadlab.com>; Wenger, Eric <ewenger@burnsmcd.com>
Cc: Anstaett, Ashley L <alanstaett@burnsmcd.com>; Ahlemeyer, Emily A <eaahlemeyer@burnsmcd.com>; Shanahan, Matthew <mshanagan@burnsmcd.com>; 'Jeff Smith' <jsmith@occutec.com>
Subject: RE: Issues with Samples Received Today for Goodfellow Blvd Project-COC Attached for Your Review

From: Wenger, Eric [<mailto:ewenger@burnsmcd.com>]
Sent: Tuesday, October 26, 2021 5:05 PM
To: Tiffany Stone
Cc: Anstaett, Ashley L; Ahlemeyer, Emily A; Shanahan, Matthew; Jeff Smith
Subject: RE: Issues with Samples Received Today for Goodfellow Blvd Project-COC Attached for Your Review

Per my discussion with Matt Shanahan, Do not analyze the following samples – we plan to resample:

- 105E-W-01
- 105E-W-02
- 104-W-01 thru 104-W-04 (8 samples)
- 104-W-05

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For the analysis method, I need to know the reporting limits so I can calculate minimum detection levels/ft², then we'll let you know which method. Please provide the following...

Lead EHS Reporting Limits for wipe samples:

Flame AA = 5 ug total lead per sample

ICP (normal reporting limit) = 2.0 ug for Lead only

ICP (Goodfellow lowered reporting limit) = .15 ug for Lead only

- For clarification, please also provide **which wipe cloth to be used for each** of the above analyses. Whatman Filters are preferred but not a must unless it's for Hg, otherwise it can be the regular ASTM specified Lead wipes. —For Metals by ICP, Ghost wipes are preferred, especially when reaching the lower detection limits for the Goodfellow project (Ghost wipes are a must). Regular lead wipes for Flame AA NOT Ghost wipes

Looks like our smallest surface area is 0.375 ft², so will need ICP, as we want reporting limits all <10 ug/ft.

Thank you!

Eric Wenger, CIH, LEED AP \ Burns & McDonnell

Associate Corporate Safety & Industrial Hygienist

o 816-822-3894 \ m 913-313-7954

ewenger@burnsmcd.com \ burnsmcd.com

9400 Ward Parkway \ Kansas City, MO 64114

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From: Tiffany Stone <tiffany@leadlab.com>

Sent: Monday, October 25, 2021 4:24 PM

To: Shanahan, Matthew <mshanahan@burnsmcd.com>; Wenger, Eric <ewenger@burnsmcd.com>

Subject: Issues with Samples Received Today for Goodfellow Blvd Project-COC Attached for Your Review

Importance: High

Good Afternoon Matt & Eric,

I encountered the following issues with samples received today:

The caps were loose on several tubes. In fact, samples labeled 105E-W-01 and 105E-W-02 were uncapped and the wipes were loose in the shipping bag. I am not sure which wipe belongs to which tube.

I have 2 sets of sample series labeled 104-W-01 thru 104-W-04 with also an extra sample labeled 104-W-05 but I am missing the 105-W-01 thru 105-W-05 series, I am sure one of these 104 series is supposed to be the 105 series but I have no way of telling which.

The COC indicates Lead only by ICP analysis. In the past, I have never only seen Lead requested....I wanted to verify the metals needed and if ICP analysis is definitely needed. Flame AA reporting limit is 5ug total Lead.

4/4/8

Please let me know how to proceed.

Thanks so much,

Tiffany



Tiffany Stone / Customer Service Supervisor

ENVIRONMENTAL HAZARDS SERVICES, LLC

7469 Whitepine Road, Richmond, VA 23237

P: 800-347-4010 | F: 804-275-4907

www.leadlab.com

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

Lead Dust Wipe Analysis Report

Report Number: 21-11-01492

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

Received Date: 11/09/2021
 Analyzed Date: 11/12/2021
 Reported Date: 11/12/2021

Project/Test Address: GFC; 4300 Goodfellow Blvd
 Collection Date: 10/27/2021

Client Number:
 26-3514

Laboratory Results

Fax Number:
 816-822-3494

Lab Sample Number	Client Sample Number	Collection Location	Surface	Total Pb (ug)	Wipe Area (ft ²)	Concentration (ug/ft ²)	Narrative ID
21-11-01492-001	105E-W-01			<5.00	1.00	<5.00	
21-11-01492-002	105E-W-02			<5.00	1.00	<5.00	
21-11-01492-003	104-W-01			<5.00	1.00	<5.00	
21-11-01492-004	104-W-02			<5.00	1.00	<5.00	
21-11-01492-005	104-W-03			<5.00	1.00	<5.00	
21-11-01492-006	105-W-01			<5.00	1.00	<5.00	
21-11-01492-007	105-W-03			<5.00	0.972	<5.15	
21-11-01492-008	105-W-04			<5.00	0.979	<5.11	
21-11-01492-009	105-W-05			<5.00	--	---	

Environmental Hazards Services, L.L.C

Client Number: 26-3514

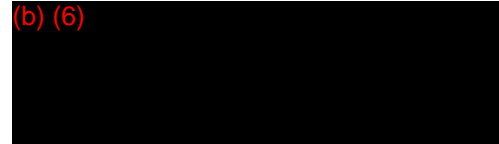
Report Number: 21-11-01492

Project/Test Address: GFC; 4300 Goodfellow Blvd

Lab Sample Number	Client Sample Number	Collection Location	Surface	Total Pb (ug)	Wipe Area (ft ²)	Concentration (ug/ft ²)	Narrative ID
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Method: ASTM E-1979-17/EPA SW846 7000B

Accreditation #:



Reviewed By Authorized Signatory:

Tasha Eaddy
QA/QC Clerk

Lead Hazard and Clearance Standards Table

Description	EPA - Effective 12/2020	HUD Grant Programs
Hazard Standard, Floors	≥ 10 µg/ft ²	≥ 10 µg/ft ²
Hazard Standard, Sills	≥ 100 µg/ft ²	≥ 100 µg/ft ²
Clearance, Floors	< 10 µg/ft ²	< 10 µg/ft ²
Clearance, Sills	< 100 µg/ft ²	< 100 µg/ft ²
Clearance, Troughs	< 400 µg/ft ²	< 100 µg/ft ²
Clearance, Porch Floors	Not Regulated	< 40 µg/ft ²

The Reporting Limit (RL) is 5.00 ug Total Pb. Reported results are not corrected for field blanks. Dust wipe area and results are calculated based on area measurements determined by the client. All internal quality control requirements associated with this batch were met, unless otherwise noted.

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. Sample location, description, area, etc., was provided by the client. Results reported above in ug/ft² are calculated based on area supplied 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.

ELLAP Accrediitation through AIHA LAP, LLC (100420), NY ELAP #11714.

Legend	ug = microgram	ug/ft ² = micrograms per square foot	Pb = lead
	mL = milliliter	ft ² = 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: eaahlemeyer@burnsmcd.com

Project Name / Testing Address: GFC / 4300 Goodfellow Blvd	
PO Number: 168765	Collected By: <u>Jeff Smith</u>
Turn-Around Time: <input checked="" type="checkbox"/> 3 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 1 DAY <input type="checkbox"/> SAME DAY OR WEEKEND - Must Call Ahead	

CAS NUMBER	Client Sample ID	Collection Date & Time	METALS							Other Metals <i>Lead only</i>	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 Circle The Unit of Measurement Used cm or <u>in</u>	
																Mins.	L/min.	Total Liters		
1	1056-W-01	10/27/01 1132																		12 x 12
2	1056-W-02	1138																		12 x 12
3	104-W-01	1240																		12 x 12
4	104-W-02	1248																		12 x 12
5	104-W-03	1254																		12 x 12
6	104-W-04	1303																		3 x 4
7	105-W-01	0810																		12 x 12
8	105-W-02	0815																		14 x 3
9	105-W-03	0820																		14 x 10
10	105-W-04	0825																		4.7 x 30
11	105-W-05	0830																		NA x NA
12																				x
13																				x
14																				x
15																				x

Released By: <u>Ashley Anstaeff</u>	Date: <u>11/9/21</u>	Time: <u>1030</u>
Signature: <u>(b) (6)</u>		

LAB USE ONLY - BELOW THIS LINE

Received By: Tah

Signature: (b) (6)

Date: 11/9/21 Time: 12:15 AM PM

Portal Contact Added

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

21-11-01492

Due Date:
11/12/2021
(Friday)
EL

MM-L
(b) (6)



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: 21-11-01495

Received Date: 11/09/2021

Analyzed Date: 11/12/2021

Reported Date: 11/12/2021

Project/Test Address: 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
21-11-01495-001	104-W-04	Lead (Pb)	0.222	<0.500	<9.0	
21-11-01495-002	105-W-02	Lead (Pb)	0.292	<0.500	<6.9	

Environmental Hazards Services, L.L.C

Client Number: 26-3514

Report Number: 21-11-01495

Project/Test Address: GFC; 4300 Goodfellow Blvd

Lab Sample Number	Client Sample Number	Analyte:	Wipe Area (ft ²)	Total Metal (ug)	Concentration (ug/ft ²)	Narrative ID
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Sample Narratives:

Analyst: Kailee Guthrie

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/ft ² = micrograms per square foot
	mL = milliliter	ft ² = 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	eaahlemeyer@burnsmcd.com
Project Name / Testing Address			
GFC / 4300 Goodfellow Blvd			
PO Number	168765	Collected By	Jeff Smith
Turn-Around Time	<input checked="" type="checkbox"/> 3 DAY <input type="checkbox"/> 2 DAY <input type="checkbox"/> 1 DAY <input type="checkbox"/> SAME DAY OR WEEKEND - Must Call Ahead		

LAB NUMBER	Client Sample ID	Collection Date & Time	METALS							Other Metals <i>Lead only</i>	PARTICULATES					AIR			WIPES AREA <small>Circle The Unit of Measurement Used</small> cm or <u>in</u>	
			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.		
																Mins.	L/min.	Total Liters		
1	1056-W-01	10/27/21 1132								Flame AA										12 x 12
2	1056-W-02	1138								Flame AA										12 x 12
3	104-W-01	1240								Flame AA										12 x 12
4	104-W-02	1248								Flame AA										12 x 12
5	104-W-03	1254								Flame AA										12 x 12
6	104-W-04	1303								ICP										8 x 4
7	105-W-01	0810								Flame AA										12 x 12
8	105-W-02	0815								ICP										14 x 3
9	105-W-03	0820								Flame AA										14 x 10
10	105-W-04	0825								Flame AA										4.7 x 30
11	105-W-05	0830								Flame AA										NA x NA
12																				x
13																				x
14																				x
15																				x

Released By:	Ashley Anstath	Date:	11/5/21	Time:	1030
Signature:	(b) (6)				

LAB USE ONLY - BELOW THIS LINE

Received By: T.H.W.

Signature: (b) (6)

Date: 11/9/21 Time: 12:15 AM PM

Portal Contact Added

21-11-01495

Due Date:
11/12/2021
(Friday)
EL MM-L