OCCU-TEC
100 NW Business Park Lane
Riverside, MO 64150
Telephone: 816.231.5580
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www.occutec.com

July 17, 2018

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

Re: Metals Investigation – Building 110 - Basement
Goodfellow Federal Complex
4300 Goodfellow Boulevard
St. Louis, Missouri 63120

Ms. Czarnecki:

OCCU-TEC conducted a limited lead-based paint and metals contaminated dust investigation in the basement of Building 110 located at the Goodfellow Federal Center at the above referenced address. Samples were collected to further assess legacy contamination in the basement of Building 110 in preparation for upcoming remodeling activities planned for the area.

OCCU-TEC collected a total of five (5) wipe samples for settled dust from stored materials located throughout the basement of Building 110. In addition to collecting wipe samples, OCCU-TEC utilized an X-ray Florescence analyzer to assess the lead content of various surfaces throughout the basement.

Methodology

Dust wipe sampling was conducted in accordance with ASTM Standard E1728-16: Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Lead Determination. ASTM Standard E1728-16 is consistent with the methodology described in the Housing and Urban Development (HUD) Guidelines and 40 CFR 745.63. Dust samples were sent to SanAir Technologies Laboratory of Powhatan, Virginia for analysis of Resource Conservation and Recovery Act (RCRA) 7 metals

(Silver, Arsenic, Barium, Cadmium, Chromium, Lead, and Selenium) by EPA Method M3050/6010C). The Brookhaven National Laboratory's Surface Wipe Sampling Procedure (IH75190) was also used as a guideline.

The lead-based paint testing was conducted using a Heuresis Corporation Model Pb200i X-ray Florescence (XRF) detector, Serial # 01098, General License #53-0720, utilizing a Cobalt - 57 radioisotope source with an activity level of 5 millicuries (mCi). A material is considered lead-containing if at least one sample collected from a distinct sampling combination shows a result of 1.0 mg/cm2 or higher which is in accordance with the definition of a lead-containing material as per HUD and the State of Missouri.

Results and Conclusions

Of the wipe samples collected, three (3) of the five (5) samples contained concentrations of lead above the referenced Brookhaven guidelines. The samples collected containing elevated lead above the referenced guidelines included samples collected from the following locations:

- The top of a stored folding table (sample 110-B-01, Pb=84 ug/ft^2)
- The top of mounted ducting (sample 110-B-04, Pb=200 ug/ft^2)
- The top of stored raised flooring (sample 110-B-05, Pb=68 ug/ft^2)

It should be noted that previous wipe sample analytical results noted in the report titled *Asbestos Air, Lead, Air, and Lead Dust Investigation Report* dated March 4, 2016, indicated elevated lead concentrations in additional areas of the basement of Building 110.

Of the assays collected for XRF analysis, one (1) of eight (8) readings collected contained concentrations of lead greater than 1.0 mg/cm^2. The reading containing a concentration greater than 1.0 mg/cm^2 was taken from a dark green brick wall located on the north side of the room adjacent to the north stairwell.

It should be noted that the minimum detection limit for Cadmium (<2.5 ug/ft^2) is greater than the minimum concentration of 1.9 ug/ft^2. Additionally, Chromium was noted in several samples collected. Due to the methodology, Chromium cannot be differentiated between Chromium III and Chromium VI and a level comparison cannot be made with the current information available.

OCCU-TEC appreciates the opportunity to provide the U.S. General Services Administration with the above referenced testing services. If you have any questions, please contact us at (816) 994-3416.

Best Regards,

(b) (6)

Kevin Heriford
Project Manager

ATTACHMENTS
XRF Analysis Results Table
Laboratory Analytical Results and Chain of Custody Documentation

XRF Analysis Results Table

Reading #	mgcm2	Result	DateTime	Floor	Room	Side	Component	Color	Substrate
312	1.1	Positive	6/29/2018 7:09	Basement	Calibration				
313	0.7	Negative	6/29/2018 7:11	Basement	Calibration				
314	0.8	Negative	6/29/2018 7:11	Basement	Calibration				
316	0.1	Negative	6/29/2018 7:41	Basement	110	East	Pillar	White	Concrete
317	0.1	Negative	6/29/2018 7:41	Basement	110	North	Ceiling	White	Concrete
318	0.3	Negative	6/29/2018 7:42	Basement	110	North	Wall	White	Cinder Block
319	-0.3	Negative	6/29/2018 7:43	Basement	110	South	Wall	White	Brick
320	-0.2	Negative	6/29/2018 7:44	Basement	110	North	Wall	White	Brick
321	1	Positive	6/29/2018 7:44	Basement	110	North	Wall	Dark Green	Brick
322	0.6	Negative	6/29/2018 7:47	Basement	110	West	Pillar	Lime Greed	Concrete
323	0.4	Negative	6/29/2018 7:48	Basement	110	West	Wall	Orange	Concrete
324	0.7	Negative	6/29/2018 8:26	Basement	Calibration				
325	1.3	Positive	6/29/2018 8:27	Basement	Calibration				
326	0.7	Negative	6/29/2018 8:28	Basement	Calibration				

SanAir Technologies Laboratory

Analysis Report

prepared for

Occu-Tec

Report Date: 7/12/2018
Project Name: GFC - 110 Basement
Project #: 918004
SanAir ID#: 18028293

NVLAP LAB CODE 200870-0

AIHA LAP, LLC ACCREDITED LABORATORY ENVIRONMENTAL LEAD ENVIRONMENTAL MICROBIOLOGY ISO/IEC 17025:2005 LAB # 162952

Virginia SBE Certification # 652931

Texas Licensed Mold Analysis Laboratory License # LAB0166

SanAir Technologies Laboratory

804.897.1177 www.sanair.com

SanAir Technologies Laboratory, Inc.

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Web: http://www.sanair.com E-mail: iaq@sanair.com

Occu-Tec
100 NW Business Park Lane
Riverside, MO 64150

July 12, 2018

SanAir ID # 18028293
Project Name: GFC - 110 Basement
Project Number: 918004

Dear Kevin Heriford,

We at SanAir would like to thank you for the work you recently submitted. The 5 sample(s) were received on Thursday, July 05, 2018 via FedEx. The final report(s) is enclosed for the following sample(s): 110-B-01, 110-B-02, 110-B-03, 110-B-04, 110-B-05.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

(b) (6)

Abisola Kasali
Metals Laboratory Director
SanAir Technologies Laboratory

Final Report Includes:
- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

sample conditions:
5 sample(s) in Good condition

180288293

SanAir Technologies Laboratory

1551 Oakbridge Dr STE B
Powhatan, VA 23139
804.897.1177 / 888.895.1177
Fax 804.897.0070
sanair.com

Metals & Lead
Chain of Custody
Form 70, Revision 10, 05/18/18

SanAir ID Number
pm 7/5/18
~~180289~~23

Company: OCCU-TEC, Inc	Project #: 918004	Phone #: 816-825-0628
Address: 100 NW Business Park Ln	Project Name: GFC-110 Basement	Phone #: 816-994-3416
City, St., Zip: Riverside MO, 64150	Date Collected: 6-29-18	Fax #: 816-994-3466
Samples Collected By: K Hereford	P.O. Number:	Email: khereford@occutec
Account #:	U.S. State Collected in: MO	Email:

Matrix Types

- [ ] Air (ug/m³)
- [X] Wipe (ug/ft²)
- [ ] Paint [ ] Soil [ ] Bulk (ug/g or ppm)
- [ ] Other:

Metals Analysis Types

- [ ] Total Concentration of Lead
- [X] Total Concentration of RCRA 8 Metals
- [ ] TCLP for Lead
- [ ] TCLP for RCRA 8 Metals
- [ ] ICP-total concentration of metals (please list metals): Not Mercury

Turn Around Time

- [ ] Same Day
- [ ] 1 Day
- [ ] 2 days
- [ ] 3 Days
- [ ] 4 Days
- [ ] Standard (5 day)
- [ ] Other Test:

Sample #	Collection Date & Time	Sample Identification/Location	Flow Rate	Start Time	Stop Time	Volume (L) Area (Sq ft)
110-B-01	6-29-18 / 0815	Table Top				1 SF
110-B-02	6-29-18 / 0820	Stored Light				1 SF
110-B-03	6-29-18 / 0825	Stored Ducting				1 SF
110-B-04	6/29/18 / 0830	Top of Mounted Duct				1 SF
110-B-05	6-29-18 / 0835	Top of Stored Raised Flaring				1 SF

Special Instructions * Do not analyse Mercury

Relinquished by	Date	Time	Received by	Date	Time
(b) (6)	6-3-18	1325	(b) (6)	~~7/5/18~~ pm 7/5/18 7/5/18	9:55 am

If no technician is provided, then the primary contact for your account will be selected. Unless scheduled, the turnaround time for all samples received after 3 pm EST will be logged in the next business day. Weekend or holiday work must be scheduled ahead of time and is charged at 150% of the 3hr TAT or a minimum charge of $150. A courier charge will be applied for same day and one-day turnaround times for offsite work. SanAir covers Standard Overnight FedEx shipping. Shipments billed to SanAir with a faster shipping rate will result in additional charges.

Page ___ of ____

18028293

Maria E. Coker

From: Jennifer L. McGee
Sent: Thursday, July 05, 2018 11:58 AM
To: Maria E. Coker; Jordan S. Germain; Abi O. Kasali; Jaynie E. Laverty
Subject: FW: 918004/ GFC - 110 Basement - Missing TAT
Attachments: image001.jpg

From: Kevin Heriford [mailto:kheriford@occutec.com]
Sent: Thursday, July 05, 2018 11:55 AM
To: Jennifer L. McGee <jmcgee@sanair.com>
Subject: Re: 918004/ GFC - 110 Basement - Missing TAT

Standard please.

On Thu, Jul 5, 2018, 10:47 AM Jennifer L. McGee <jmcgee@sanair.com> wrote:

RE: 918004/ GFC – 110 Basement

SanAir ID: 18028293

Hello,

For the job listed above, there isn't a turnaround time marked on the COC. What TAT would you like for these wipe samples for metals analysis?
Thanks in advance.

Jennifer L. McGee

Customer Service

SanAir Technologies Laboratory

1551 Oakbridge Drive, Suite B

Powhatan, VA 23139

804.897.1177 Office

804.897.0070 Fax

1 MC JUL 05 2018 11:55 AM

SanAir Technologies Laboratory, Inc

1551 Oakbridge Dr, Suite B Powhatan, VA 23139
804.897.1177 Toll Free 888.895.1177 Fax: 804.897.0070
www.sanair.com email:iaq@sanair.com

SanAir ID Number
18028293
Final Report

Name: Occu-Tec
Address: 100 NW Business Park Lane
Riverside, MO 64150

Project Number: 918004
P.O. Number:
Project Name: GFC - 110 Basement

Collected Date: 6/29/2018
Received Date: 7/5/2018 11:55 AM
Report Date: 7/12/2018 2:40 PM
Analyst : Abisola O. Kasali

Analytes Requested: Wipe ICP-7 Metals
Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Sample	MRL ug/Sample
18028293-01	110-B-01	Silver (Ag)	Table Top	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		24	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		8.0	2.5
		Lead (Pb)		84	2.5
		Selenium (Se)		<2.5	2.5
18028293-02	110-B-02	Silver (Ag)	Stored Light	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		2.6	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		<2.5	2.5
		Lead (Pb)		9.0	2.5
		Selenium (Se)		<2.5	2.5
18028293-03	110-B-03	Silver (Ag)	Stored Ducting	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		19	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		7.6	2.5
		Lead (Pb)		33	2.5
		Selenium (Se)		<2.5	2.5
18028293-04	110-B-04	Silver (Ag)	Top Of Mounted Duct	3.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		65	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		14	2.5
		Lead (Pb)		200	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on ug/sample

Signature: (b) (6)
Date: 7/6/2018

Reviewed: (b) (6)
Date: 7/12/2018

Analytes Requested: Wipe ICP-7 Metals

Test Method: EPA M3050B/6010C

REPORT OF ANALYSIS

Lab Sample #	Field Sample #	Analyte	Sample Description	Results in ug/Sample	MRL ug/Sample
18028293-05	110-B-05	Silver (Ag)	Top Of Stored Raised Flaring	<2.5	2.5
		Arsenic (As)		<2.5	2.5
		Barium (Ba)		32	2.5
		Cadmium (Cd)		<2.5	2.5
		Chromium (Cr)		5.6	2.5
		Lead (Pb)		68	2.5
		Selenium (Se)		<2.5	2.5

MRL: Method Reporting Limit based on ug/sample

Signature: (b) (6)
Date: 7/6/2018

Reviewed: (b) (6)
Date: 7/12/2018

Disclaimer

SanAir Technologies Laboratory, Inc. participates in the Environmental Lead Accreditation Program (ELAP) administered by AIHA-LAP, LLC (Lab ID162952). Refer to our accreditation certificate or www.aihaaccreditedlabs.org for an up to date list of the Fields of Testing for which we are accredited. SanAir also participates in the State of New York's DOH-ELAP (Lab Id 11983), and has met the EPA's NLLAP program standards.

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Lead Exposure Limits

Dust

Non-Grant Funded Projects (Standard Clearance Applies):

40ug/ft^2	HUD Clearance Level for Floors
250ug/ft^2	HUD Clearance Level for Window Sills
400ug/ft^2	HUD Clearance Level for Window Troughs

Grant Funded Clearance (OLHCHH; LBPHC; LHRD Grantees):

10ug/ft^2	HUD Clearance Level for Floors
100ug/ft^2	HUD Clearance Level for Window Sills and Window Troughs
40ug/ft^2	HUD Clearance Level for Porch Floors