October 20, 2023
Diane Czarnecki
Industrial Hygienist
Facilities Management Division
GSA Public Buildings Service – Heartland Region
2300 Main Street
Kansas City, MO 64108

Re: Goodfellow Federal Center – Bldg. 106 Drinking Water Sampling
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 drinking water sampling and testing for the presence of lead and copper at Building 106 of the Goodfellow Federal Center located at 4300 Goodfellow Boulevard in St. Louis, Missouri. Sampling was completed in response to the ongoing environmental condition assessment at the Goodfellow Federal Center which is documented at the Goodfellow Federal Center Reading Room located at https://www.gsa.gov/portal/content/212361.

Drinking water sampling was conducted to determine the current levels of lead and copper in representative sources throughout the complex. Drinking water sampling at Bldg. 106 was conducted on September 28, 2023 by Ashley Anstaett of Burns & McDonnell.

METHODOLOGY
The sampling methodology used during this investigation was developed in general accordance with the United States Environmental Protection Agency's (EPA) "Quick Guide to Drinking Water Sample Collection – Second Edition" developed by the EPA Region 8 in September 2016.

Samples were collected as first draw samples in accordance with the Lead and Copper Rule (40 CFR Part 141 Subpart I). First draw samples represent 'worst case' conditions with water that has been stationary within the plumbing systems for a minimum of six hours. The samples were collected in individually labeled 1000 milliliter (mL) plastic bottles capped with Teflon septa lined screw caps. The bottles were filled to the shoulder with water from the sample source. The samples were then placed in a cooler for safe transport. Each sample was acidified at the laboratory as needed.

First draw samples could not be collected in Building 106, as the Building is operational 24 hours per day, seven days per week. Drinking water sampling for the presence of lead and copper was conducted at two (2) distinct locations within Building 106. A total of three (3) samples were obtained including duplicate samples. After each drinking water sample was collected, Burns & McDonnell filled a separate sample cup with approximately 2 inches of water. Burns & McDonnell placed an Oakton EcoTestr pH and temperature meter into the sample cup. After readings stabilized, Burns & McDonnell recorded the readings for pH (the acidity or basicity of an aqueous solution) and the temperature (in degrees Celsius) on site specific sample logs.

Drinking water samples were submitted to Eurofins-Eaton Analytical in South Bend, IN for analyses of lead and copper. Eurofins-Eaton Analytical is certified by the State of Missouri Department of Natural Resources (MDNR) as an approved drinking water laboratory. Eurofins-Eaton Analytical's Missouri Certification number is 880.

The drinking water samples were collected using media supplied by Eurofins-Eaton Analytical. Lead and Copper samples were collected and analyzed in accordance with EPA Method 200.8.

RESULTS AND DISCUSSION

The results for the subject testing are summarized in the table below.

Analysis	Lowest Concentration[(a)]	Highest Concentration[(a)]	Action Level[(b)]
Lead	0.50 µg/L	0.69µg/L	15 µg/L
Copper	6.7 µg/L	48 µg/L	1300 µg/L

Notes:
(a) Samples with a "<" sign indicate that the results were below the reportable limit.
(b) As per EPA Lead and Copper Rule (40 CFR Part 141 Subpart I).
(c) µg/L – micrograms per liter

No samples resulted in lead or copper concentrations over the action levels.A summary table of all sampling results by location is included in Appendix A. The complete laboratory report for the drinking water sampling from Eurofins-Eaton Analytical is attached in Appendix B.

pH

Normal pH levels for drinking water are between 6.0 to 8.5. Water with a pH < 6.5 is considered acidic, soft, and corrosive. Acidic water may contain metal ions, may cause premature damage to metal piping, and increases the likelihood of leaching. Water with a pH > 8.5 is considered alkaline or basic and can indicate that the water is hard. Hard water does not pose a health risk but can cause aesthetic problems. These problems include an alkali taste, the formation of scale deposits, and difficulty in getting soaps and detergents to lather.

Recorded pH levels in Building 106 ranged from 10.20 to 10.60 indicating the drinking water is slightly alkaline.

LIMITATIONS

The scope of this assessment was limited in nature. Burns & McDonnell collected samples from a select number of drinking water sources in an effort to minimize cost while providing a general overview of the drinking water quality at the site. Sample locations do not encompass every drinking water source at the Site. Additionally, samples were only analyzed for a select number of potential contaminants likely to affect the drinking water quality at the site. Burns & McDonnell is not responsible for potential contaminants not identified in this report.

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)

Matt Shanahan, CHMM
Project Manager

Attachments:

Appendix A - Results Summary by Location
Appendix B - Water Sample Laboratory Report

APPENDIX A – RESULTS SUMMARY BY LOCATION

Appendix A
Results Summary by Location

Sample Number	Location	pH	Temp (°C)	Water Source	Analyte	Result	Units	Above / Below	AL
106-DW-01*	Drinking fountain	10.6	18.3	DF	Copper	48	µg/L	Below	1300
106-DW-01*	Drinking fountain	10.6	18.3	DF	Lead	< 0.50	µg/L	Below	15
106-DW-02*	Duplicate of 106-DW-01	10.6	18.3	DF	Copper	48	µg/L	Below	1300
106-DW-02*	Duplicate of 106-DW-01	10.6	18.3	DF	Lead	< 0.50	µg/L	Below	15
106-DW-03*	Sink in south restroom	10.2	22.2	Sink	Copper	6.7	µg/L	Below	1300
106-DW-03*	Sink in south restroom	10.2	22.2	Sink	Lead	0.69	µg/L	Below	15

Notes:
* - Not first draw
DF - Drinking Fountain
D - Duplicate
AL - Action Level
µg/L - micrograms per liter

APPENDIX B – WATER SAMPLE LABORATORY REPORT

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Matt Shanahan
Burns & McDonnell
425 South Woods Mill Road
Suite 300
Chesterfield, Missouri 63017

Generated 10/10/2023 11:10:01 PM

JOB DESCRIPTION

GFC

JOB NUMBER

810-79862-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization

(b) (6) [redacted]

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10/10/2023 11:10:01 PM

Authorized for release by
Amanda Scott, Project Manager
Amanda.Scott@et.eurofinsus.com
(574)233-4777

Table of Contents

Definitions/Glossary

Client: Burns & McDonnell
Job ID: 810-79862-1
Project/Site: GFC

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Me hod Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Me hod Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Nega ive / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ra io (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 810-79862-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-79862-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 10/3/2023 12:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Burns & McDonnell
Project/Site: GFC

Job ID: 810-79862-1

Client Sample ID: 106 - DW - 01

Lab Sample ID: 810-79862-1

Date Collected: 09/28/23 09:02

Matrix: Drinking Water

Date Received: 10/03/23 12:20

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.50		0.50		ug/L			10/10/23 11:28	1
Copper	**48**		1.0		ug/L			10/10/23 11:28	1

Client Sample ID: 106 - DW - 02

Lab Sample ID: 810-79862-2

Date Collected: 09/28/23 09:02

Matrix: Drinking Water

Date Received: 10/03/23 12:20

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.50		0.50		ug/L			10/10/23 11:30	1
Copper	**48**		1.0		ug/L			10/10/23 11:30	1

Client Sample ID: 106 - DW - 03

Lab Sample ID: 810-79862-3

Date Collected: 09/28/23 09:00

Matrix: Drinking Water

Date Received: 10/03/23 12:20

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.69**		0.50		ug/L			10/10/23 11:32	1
Copper	**6.7**		1.0		ug/L			10/10/23 11:32	1

Lab Chronicle

Client: Burns & McDonnell
Project/Site: GFC

Job ID: 810-79862-1

Client Sample ID: 106 - DW - 01

Lab Sample ID: 810-79862-1

Date Collected: 09/28/23 09:02

Matrix: Drinking Water

Date Received: 10/03/23 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	200.8		1	76331	CA	EA SB	10/10/23 11:28

Client Sample ID: 106 - DW - 02

Lab Sample ID: 810-79862-2

Date Collected: 09/28/23 09:02

Matrix: Drinking Water

Date Received: 10/03/23 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	200.8		1	76331	CA	EA SB	10/10/23 11:30

Client Sample ID: 106 - DW - 03

Lab Sample ID: 810-79862-3

Date Collected: 09/28/23 09:00

Matrix: Drinking Water

Date Received: 10/03/23 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	200.8		1	76331	CA	EA SB	10/10/23 11:32

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: Burns & McDonnell
Project/Site: GFC

Job ID: 810-79862-1

Laboratory: Eurofins Eaton Analytical South Bend

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Missouri	State	880	09-30-24

Method Summary

Client: Burns & McDonnell
Project/Site: GFC

Job ID: 810-79862-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

Client: Burns & McDonnell
Project/Site: GFC

Job ID: 810-79862-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-79862-1	106 - DW - 01	Drinking Water	09/28/23 09:02	10/03/23 12:20
810-79862-2	106 - DW - 02	Drinking Water	09/28/23 09:02	10/03/23 12:20
810-79862-3	106 - DW - 03	Drinking Water	09/28/23 09:00	10/03/23 12:20

eurofins | Eaton Analytical

810-79862 Chain of Custody

110 S. Hill Street
South Bend, IN 46617
T: 1.800.332.4345
F: 1.574.233.8207

Order # 433311

Batch # _____

www.EurofinsUS.com/Eaton

CHAIN OF CUSTODY RECORD

Shaded area for EEA use only

REPORT TO:	SAMPLER (Signature)	PWS ID #	STATE (sample origin)	PROJECT NAME	PO#
Ashley Anstaett - alanstaett@burnsmcd.com 9400 Ward Parkway Kansas City, MO 64114	[redacted]		MO	GFC	121244
BILL TO: Same	COMPLIANCE MONITORING: Yes [ ] No [x]	POPULATION SERVED: NA	SOURCE WATER: Municipal		

LAB Number	COLLECTION DATE	COLLECTION TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1	9/28/23	0902	X		1016 - DW - 01	Lead + Copper		X		1	DW	SW
2	"	0902	X		1016 - DW - 02	Lead + Copper		X		1	DW	SW
3	"	0902	X		1016 - DW - 03	Lead + Copper		X		1	DW	SW
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
[redacted]	9/28/23	06:00 AM (PM)	[redacted]	10/3/23	1220 AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
		AM PM			AM PM
RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED FOR LABORATORY BY:	DATE	TIME
		AM PM			AM PM

LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS

pH Acceptable

CONDITIONS UPON RECEIPT (check one):

____ Iced: Wet/Blue ____ Ambient _____ °C Upon Receipt____ N/A

MATRIX CODES:

DW-DRINKING WATER
RW-REAGENT WATER
GW-GROUND WATER
EW-EXPOSURE WATER
SW-SURFACE WATER
PW-POOL WATER
WW-WASTE WATER

TURN-AROUND TIME (TAT) - SURCHARGES

SW = Standard Written: (15 working days)	0%	IV* = Immediate Verbal: (3 working days)	100%
RV* = Rush Verbal: (5 working days)	50%	IW* =Immediate Written: (3 working days)	125%
RW* = Rush Written: (5 working days)	75%	SP* = Weekend, Holiday	CALL
		STAT* = Less than 48 hours	CALL

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

* Please call, expedited service not available for all testing

10/10/2023

Login Sample Receipt Checklist

Client: Burns & McDonnell

Job Number: 810-79862-1

Login Number: 79862

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Williams, Kameron

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	False	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have leg ble labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	