OCCU-TEC
100 NW Business Park Lane
Riverside, MO 64150
Telephone: 816.231.5580
Fax: 816.231.5641
www.occutec.com

June 25, 2018

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. # 103F Drinking Water Sampling
Project # 918004.002

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, OCCU-TEC conducted drinking water sampling and testing for the presence of lead and copper at Building #103F 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 complex 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. #103F was conducted on April 24, 2018 by Mr. Justin Arnold and on May 25, 2018 by Kevin Heriford of OCCU-TEC.

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.

Drinking water sampling for the presence of lead and copper was conducted at eight (8) distinct locations within Building #103F. A total of nine (9) samples were obtained. After each drinking water sample was collected, OCCU-TEC filled a separate sample cup with approximately 2 inches of water. OCCU-TEC placed an Oakton model PHTester30 pH meter into the sample cup. After readings stabilized, OCCU-TEC recorded the readings for pH (the acidity or basicity of an aqueous solution) and the temperature (in degrees Celsius) on site specific sample logs.

Results indicated one water source with elevated lead and or copper levels above the AL. In order to further investigate the results, an additional four (4) sequential samples were collected from the source using the following methodology:

- First Sample: Approximately 250 mL as first draw.
- Second Sample: Approximately 750 mL directly after the first sample.
- Third Sample: Approximately 250 mL after the water turns cold or other indication the water is from the service line
- Fourth Sample: Approximately 250 mL a nning for approximately 3 inutes.

Sequential draws can indicate lead and copper within the tap itself, the service line, valves or the water main. Drinking water samples were submitted to Eurofins-Eaton Analytical in South Bend, Indiana 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 tables below.

Water Sample Summary

Analysis	Lowest Concentration	Highest Concentration	Action Level*
Lead	<0.001 mg/L	0.017 mg/L	0.015 mg/L
Copper	0.0049 mg/L	3.5 mg/L	1.3 mg/L

Samples with a "<" sign indicate that the results were below the reportable limit.
*As per EPA Lead and Copper Rule (40 CFR Part 141 Subpart I)

Specific water sample locations are indicated in Appendix A. A summary table of all sampling results by location is included in Appendix B. The complete laboratory report for the drinking water sampling from Eurofins-Eaton Analytical is attached in Appendix C.

LEAD

Sample 103F-18-05-A resulted in a lead level of 0.017 milligrams per liter which is above the Action Level (AL) for lead. All other samples were below the AL. GSA personnel were notified of the elevated sample results directly upon notification from the lab and the water sources were immediately taken out of service.

COPPER

Sample 103F-18-05 resulted in a copper level of 3.5 milligrams per liter which is above the AL for copper. All other samples were below [redacted] personnel were notified of the elevated sample results directly upo[redacted] and the water sources were immediately taken out of service.

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 #103F ranged from 8.81 to 9.74 indicating the drinking water is slightly alkaline.

LIMITATIONS

The scope of this assessment was limited in nature. OCCU-TEC 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. OCCU-TEC is not responsible for potential contaminants not identified in this report.

This report was prepared for the sole use of GSA. Reliance by any party other than GSA is expressly forbidden without OCCU-TEC's written permission. Any parties relying on the report, with OCCU-TEC's written permission, are bound by the terms and conditions outlined in the original proposal as if said proposal was prepared for them.

OCCU-TEC 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)

Jeff T. Smith
Senior Project Manager

(b) (6)

Kevin Heriford
Project Manager (QA/QC)

ATTACHMENTS
Appendix A, Water Sample Location Diagrams
Appendix B, Results Summary by Location
Appendix C, Water Sample Laboratory Report

Appendix A

Water Sample Location Diagrams

(b) (7)(F)

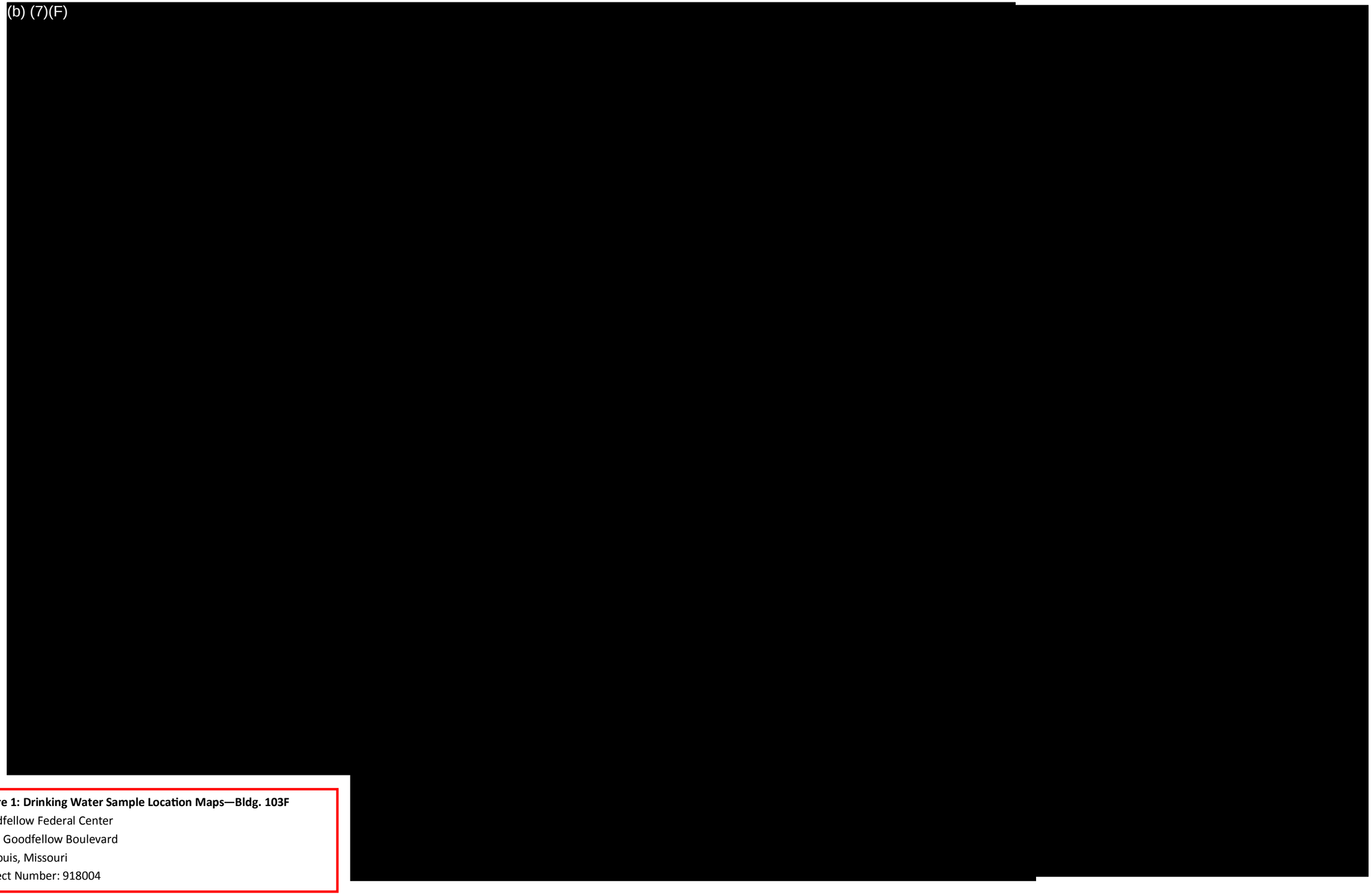

Figure 1: Drinking Water Sample Location Maps—Bldg. 103F
Goodfellow Federal Center
4300 Goodfellow Boulevard
St. Louis, Missouri
Project Number: 918004

Appendix B

Results Summary by Location

Goodfellow Federal Center - Building 103F										
Sample Number	**Location**	**Water Source**	**Temperature**	**pH**	**Analyte**		**Result**	**Units**	**Above/Below**	**AL**
103F-18-01	East Wall - Prep Area	Sink	18.1	9.71	Copper		0.015	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015
103F-18-02	Prep Area - West Side	Drinking Fountain	18.3	8.81	Copper		0.049	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015
103F-18-03	Prep Area - East Hand Sink	Sink	18.4	9.5	Copper		0.016	mg/L	Below AL	1.3
					Lead		0.0012	mg/L	Below AL	0.015
103F-18-04	Serving Area - SW end	Sink	18.9	9.62	Copper		0.015	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015
103F-18-04 (Duplicate)	Serving Area - SW end	Sink			Copper		0.018	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015
103F-18-05	Serving Area - East Wall	Sink	19.1	9.65	Copper		3.5	mg/L	Above AL	1.3
					Lead		0.0084	mg/L	Below AL	0.015
103F-18-06	Serving Area - South Wall, East side	Sink	18.3	9.7	Copper		0.0079	mg/L	Below AL	1.3
					Lead		0.0015	mg/L	Below AL	0.015
103F-18-07	Prep Area - center	Sink	18.9	9.7	Copper		0.0056	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015
103F-18-08	Water Filler - Condiment station	Drinking Fountain	17.8	9.74	Copper		0.12	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015
103F-18-05-A	Serving Area - East Wall (1st Draw)	Sink			Copper		0.19	mg/L	Below AL	1.3
					Lead		0.017	mg/L	Above AL	0.015
103F-18-05-B	Serving Area -East Wall (2nd Draw)	Sink			Copper		0.075	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015
103F-18-05-C	Serving Area - East Wall (3rd Draw)	Sink			Copper		0.0085	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015
103F-18-05-D	Serving Area - East Wall (4th Draw)	Sink			Copper		0.0049	mg/L	Below AL	1.3
					Lead	<	0.001	mg/L	Below AL	0.015

Highlight indicates results at or above the Action Level (AL)

Appendix C

Water Sample Laboratory Report

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LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Missouri	880
Alaska	IN00035	Montana	CERT0026
Arizona	AZ0432	Nebraska	NE-OS-05-04
Arkansas	IN00035	Nevada	IN00035
California	2920	New Hampshire*	2124
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New Mexico	IN00035
Connecticut	PH-0132	New York*	11398
Delaware	IN035	North Carolina	18700
Florida*	E87775	North Dakota	R-035
Georgia	929	Ohio	87775
Hawaii	IN035	Oklahoma	D9508
Idaho	IN00035	Oregon (Primary AB)*	4074-001
Illinois*	200001	Pennsylvania*	68-00466
Illinois Microbiology	17767	Puerto Rico	IN00035
Illinois Radiochemistry	IN00035	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA180008	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
EPA	IN00035		

*NELAP/TNI Recognized Accreditation Bodies

Revision date: 01/02/2018

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110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: OCCU-TEC Inc.

Attn: Kevin Heriford
100 NW Business Park Lane
Riverside, MO 64150

Report: 415657
Priority: Standard Written
Status: Final
PWS ID: Not Supplied

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3928117	103F-18-01	200.8	04/24/18 04:41	Client	05/02/18 10:00
3928118	103F-18-02	200.8	04/24/18 04:44	Client	05/02/18 10:00
3928119	103F-18-03	200.8	04/24/18 04:47	Client	05/02/18 10:00
3928120	103F-18-04	200.8	04/24/18 04:50	Client	05/02/18 10:00
3928121	103F-18-04Dup	200.8	04/24/18 04:50	Client	05/02/18 10:00
3928122	103F-18-05	200.8	04/24/18 04:54	Client	05/02/18 10:00
3928123	103F-18-06	200.8	04/24/18 05:00	Client	05/02/18 10:00
3928124	103F-18-07	200.8	04/24/18 05:02	Client	05/02/18 10:00
3928125	103F-18-08	200.8	04/24/18 05:03	Client	05/02/18 10:00

Report Summary

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Blackburn at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

(b) (6) ASM

Authorized Signature | Title | 05/16/2018 Date

Client Name: OCCU-TEC Inc.
Report #: 415657

Client Name: OCCU-TEC Inc. Report #: 415657

Sampling Point: 103F-18-01 PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**15**	ug/L	---	05/10/18 19:06	3928117
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	05/10/18 19:06	3928117

Sampling Point: 103F-18-02 PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**49**	ug/L	---	05/10/18 19:08	3928118
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	05/10/18 19:08	3928118

Sampling Point: 103F-18-03 PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**16**	ug/L	---	05/10/18 19:11	3928119
7439-92-1	Lead	200.8	15 !	1.0	**1.2**	ug/L	---	05/10/18 19:11	3928119

Sampling Point: 103F-18-04 PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**15**	ug/L	---	05/10/18 19:13	3928120
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	05/10/18 19:13	3928120

Sampling Point: 103F-18-04Dup PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**18**	ug/L	---	05/10/18 19:20	3928121
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	05/10/18 19:20	3928121

Client Name: OCCU-TEC Inc. Report #: 415657

Sampling Point: 103F-18-05 PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**3500**	ug/L	---	05/11/18 02:03	3928122
7439-92-1	Lead	200.8	15 !	1.0	**8.4**	ug/L	---	05/10/18 19:27	3928122

Sampling Point: 103F-18-06 PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**7.9**	ug/L	---	05/10/18 19:29	3928123
7439-92-1	Lead	200.8	15 !	1.0	**1.5**	ug/L	---	05/10/18 19:29	3928123

Sampling Point: 103F-18-07 PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**5.6**	ug/L	---	05/10/18 19:32	3928124
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	05/10/18 19:32	3928124

Sampling Point: 103F-18-08 PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**120**	ug/L	---	05/10/18 19:34	3928125
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	05/10/18 19:34	3928125

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

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Eaton Analytical

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

Order # 341078
Batch # 415657

www.EurofinsUS.com/Eaton

CHAIN OF CUSTODY RECORD

Page 1 of 1

Shaded area for EEA use only

REPORT TO:
Ocem-Tec
100 NW Business Park Lane, Riverside, MO 64150

BILL TO: Accounts Receiving
100 NW Business Park Lane
Riverside, MO 64150

SAMPLER (Signature): (6)

COMPLIANCE MONITORING: Yes ☐ No ☒

PWS ID #: DW
STATE (sample origin): MO
POPULATION SERVED:
SOURCE WATER: DW
PROJECT NAME: 918007.002 103F
PO#:

LAB Number	COLLECTION DATE	TIME	AM	PM	SAMPLING SITE	TEST NAME	SAMPLE REMARKS	CHLORINATED YES	CHLORINATED NO	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
1 3928 17	4-24-18	4:41	X		103F-18-01	Lead + Copper		X		1	DW	SW
2 18	4-24-18	4:44	X		103F-18-02	Lead + Copper		X		1	DW	SW
3 19	4-24-18	4:47	X		103F-18-03	Lead + Copper		X		1	DW	SW
4 120	4-24-18	4:50	X		103F-18-04	Lead + Copper		X		1	DW	SW
5 121	4-24-18	4:50	X		103F-18-04 Dup	Lead + Copper		X		1	DW	SW
6 122	4-24-18	4:54	X		103F-18-05	Lead + Copper		X		1	DW	SW
7 123	4-24-18	5:00	X		103F-18-06	Lead + Copper		X		1	DW	SW
8 124	4-24-18	5:02	X		103F-18-07	Lead + Copper		X		1	DW	SW
9 125	4-24-18	5:03	X		103F-18-08	Lead + Copper		X		1	DW	SW
10												
11												
12												
13												
14												

RELINQUISHED BY:(Signature)	DATE	TIME AM	PM	RECEIVED BY:(Signature)	DATE	TIME AM	PM
(6)	4-30-18						
RELINQUISHED BY:(Signature)	DATE	TIME AM	PM	RECEIVED BY:(Signature)	DATE	TIME AM	PM
RELINQUISHED BY:(Signature)	DATE	TIME AM	PM	RECEIVED FOR LABORATORY BY: (6)	DATE 5/2/18	TIME 1000 AM	PM

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

LAB COMMENTS

Client used white-out on COC
Cross off by client dm

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

* Please call, expedited service not available for all testing

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

eurofins | Eaton Analytical

LABORATORY REPORT

If you have any questions concerning this report, please do not hesitate to call us at (800) 332-4345 or (574) 233-4777.

STATE CERTIFICATION LIST

State	Certification	State	Certification
Alabama	40700	Missouri	880
Alaska	IN00035	Montana	CERT0026
Arizona	AZ0432	Nebraska	NE-OS-05-04
Arkansas	IN00035	Nevada	IN00035
California	2920	New Hampshire*	2124
Colorado	IN035	New Jersey*	IN598
Colorado Radiochemistry	IN035	New Mexico	IN00035
Connecticut	PH-0132	New York*	11398
Delaware	IN035	North Carolina	18700
Florida*	E87775	North Dakota	R-035
Georgia	929	Ohio	87775
Hawaii	IN035	Oklahoma	D9508
Idaho	IN00035	Oregon (Primary AB)*	4074-001
Illinois*	200001	Pennsylvania*	68-00466
Illinois Microbiology	17767	Puerto Rico	IN00035
Illinois Radiochemistry	IN00035	Rhode Island	LAO00343
Indiana Chemistry	C-71-01	South Carolina	95005
Indiana Microbiology	M-76-07	South Dakota	IN00035
Iowa	098	Tennessee	TN02973
Kansas*	E-10233	Texas*	T104704187-15-8
Kentucky	90056	Texas/TCEQ	TX207
Louisiana*	LA180008	Utah*	IN00035
Maine	IN00035	Vermont	VT-8775
Maryland	209	Virginia*	460275
Massachusetts	M-IN035	Washington	C837
Michigan	9926	West Virginia	9927 C
Minnesota*	018-999-338	Wisconsin	999766900
Mississippi	IN035	Wyoming	IN035
EPA	IN00035		

*NELAP/TNI Recognized Accreditation Bodies

Revision date: 01/02/2018

eurofins | Eaton Analytical

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: OCCU-TEC Inc.

Attn: Kevin Heriford
100 NW Business Park Lane
Riverside, MO 64150

Report: 417862
Priority: Standard Written
Status: Final
PWS ID: Not Supplied

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3949065	103F-18-05-A	200.8	05/25/18 06:34	Client	05/31/18 09:45
3949066	103F-18-05-B	200.8	05/25/18 06:34	Client	05/31/18 09:45
3949067	103F-18-05-C	200.8	05/25/18 06:35	Client	05/31/18 09:45
3949068	103F-18-05-D	200.8	05/25/18 06:37	Client	05/31/18 09:45

Report Summary

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Kelly Blackburn at (574) 233-4777.

(b) (6) ASM — 06/06/2018

Authorized Signature | Title | Date

Client Name: OCCU-TEC Inc.
Report #: 417862

Client Name: OCCU-TEC Inc. Report #: 417862

Sampling Point: 103F-18-05-A PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**190**	ug/L	---	06/01/18 19:04	3949065
7439-92-1	Lead	200.8	15 !	1.0	**17**	ug/L	---	06/01/18 19:04	3949065

Sampling Point: 103F-18-05-B PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**75**	ug/L	---	06/01/18 19:12	3949066
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	06/01/18 19:12	3949066

Sampling Point: 103F-18-05-C PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**8.5**	ug/L	---	06/01/18 19:14	3949067
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	06/01/18 19:14	3949067

Sampling Point: 103F-18-05-D PWS ID: Not Supplied

Lead and Copper									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed	EEA ID #
7440-50-8	Copper	200.8	1300 !	1.0	**4.9**	ug/L	---	06/01/18 19:16	3949068
7439-92-1	Lead	200.8	15 !	1.0	< 1.0	ug/L	---	06/01/18 19:16	3949068

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL
Symbol:	*	^	!

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.

eurofins | Eaton Analytical

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F: 1.574.233.8207

Order # 341078
Batch # 417862

www.EurofinsUS.com/Eaton

Shaded area for EEA use only

CHAIN OF CUSTODY RECORD

Page 1 of 1

REPORT TO: Jeff Smith jsmith@occutec.com

SAMPLER (Signature): [redacted (b) (6)]

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

COMPLIANCE MONITORING: Yes [ ] No [X]

PWS ID #: DW

STATE (sample origin): MO

POPULATION SERVED:

SOURCE WATER:

PROJECT NAME: 918004.02 GFC 103F

PO#:

	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	3949065	5-25-18	0634	X		103F-18-05-A	Lead & Copper	Sequential draw	X				
2	066		0634	X		103F-18-05-B *	"		X				
3	067		0635	X		103F-18-05-C **	"		X				
4	068		0637	X		103F-18-05-D	"		X				
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

RELINQUISHED BY:(Signature)	DATE	TIME	RECEIVED BY:(Signature)	DATE	TIME
[redacted (b) (6)]	5-29-18	3:00 AM PM			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	[redacted (b) (6)]	5-31-18	0945 AM PM

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

LAB COMMENTS
* bottle approx. 1/2 full
** bottle approx. 1/3 full
ss 5-31-18

CONDITIONS UPON RECEIPT (check one):
___ Iced: Wet/Blue X Ambient ___ °C Upon Receipt X 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

* Please call, expedited service not available for all testing

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