City of Saint Louis

DEPARTMENT OF PUBLIC UTILITIES
--WATER DIVISION--

TISHAURA O. JONES
MAYOR

Supply and Purifying Section
Chain of Rocks Laboratory
10450 Riverview Dr.
Saint Louis, MO 63017
(314) 592-8221
FAX (314) 868-3197

CURTIS B. SKOUBY, P.E.
DIRECTOR OF PUBLIC UTILITIES

January 9, 2023

Missouri Department of Natural Resources
DEQ-PDWP
P.O. Box 176
Jefferson City, MO 65102

RE: Monthly Reports - Bacteriological and Turbidity Analysis

To Whom It May Concern:

Attached please find one copy of each of the following monthly bacteriological and turbidity reports for December 2022 for the City of St. Louis Water Division:

1. Monthly report of Coliform Bacteria Analysis
2. Monthly reports of Turbidity Analysis on Finished Water for the Howard Bend and Chain of Rocks Water Treatment Plants
3. Monthly reports of Disinfection and Turbidity for the Howard Bend and Chain of Rocks Water Treatment Plants
4. Monthly Chemical Analysis of Finished Water, Residual Chlorine
5. Monthly Total Organic Carbon (TOC) Removal Monitoring
6. Quarterly Total Trihalomethanes & Haloacetic Acids Monitoring (TTHM/HAA5)

Please do not hesitate to contact us if you should have any questions.

Sincerely,

James W. Kopp
Laboratory Director

cc: Curtis Skouby
Tim Ganz
Amy Haddock
Kevin Dunn
John M. Phillips
File

DEPARTMENT OF NATURAL RESOURCES
PUBLIC DRINKING WATER PROGRAM
P.O. BOX 1038 - JEFFERSON CITY, MO. 65101
(314) 751-3241

MONTHLY REPORT OF COLIFORM BACTERIA ANALYSIS
CITY OF ST. LOUIS WATER DIVISION
LABORATORY CERTIFICATION NO. 00241
I.D. NO. 6010715

TOTAL NUMBER OF SAMPLES EXAMINED: 161
PERCENT OF SAMPLES TOTAL COLIFORM - POSITIVE: 0.00%
TYPE OF COLIFORM TESTING: COLILERT
TOTAL NUMBER OF COLIFROM TESTS REQUIRED: 150

MONTH: December-2022

SAMPLING DATA - 100 ML SAMPLES

SAMPLE I.D. NO.	LOCATION	DATE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	# OF POSITIVES	# OF SAMPLES
D01	1640 S. KINGSHIGHWAY	A	A			A	A	A	A	A			A	A	A	A	A			A	A	A	A					A	A	A	A		0	20
D02	10450 RIVERVIEW DR.	A	A			A	A	A	A	A			A	A	A	A	A			A	A	A	A					A	A	A	A		0	20
D03	1229 MCCAUSLAND	A	A			A	A	A	A	A			A	A	A	A	A			A	A	A	A					A	A	A			0	19
D06	5000 S. KINGSHIGHWAY		A			A		A		A				A		A				A		A	A										0	9
D08	4810 ENRIGHT	A				A	A		A				A		A															A			0	7
D09	2224 S. 7TH TUCKER	A	A					A	A	A			A	A	A	A	A			A	A	A						A	A	A			0	16
D10	314 TUCKER	A	A			A	A	A	A	A			A	A	A	A	A			A	A	A	A					A	A				0	18
D11	2137 SULPHUR																																	
D12	4510 MARGARETTA								A						A		A				A												0	4
D13	8227 S. BROADWAY					A		A		A						A													A				0	5
D14	8300 N. BROADWAY	A	A			A	A			A			A		A	A	A			A			A							A			0	12
D15	4408 DONOVAN		A			A		A		A				A		A				A		A	A						A				0	10
D16	1400 SHAWMUT	A							A				A		A															A			0	5
D18	1501 SALISBURY																																	
D20	4233 GRACE																																	
D21	5412 JAMIESON AVE.																																	
D24	5020 CREIGHTON DR.																																	
D28	3523 MAGNOLIA AVE.	A	A			A	A	A	A	A			A	A		A	A				A	A						A	A	A			0	16
D30	NOT ASSIGNED																																	
D31	NOT ASSIGNED																																	
D32	NOT ASSIGNED																																	
D33	NOT ASSIGNED																																	
D34	NOT ASSIGNED																																	
	REPEAT NO #1																																	
	REPEAT NO #2																																	
	REPEAT NO #3																																	
	NUMBER POSITIVE	0	0			0	0	0	0	0			0	0	0	0	0			0	0	0	0					0	0	0	0		0	
	TOTAL SAMPLES/DAY	9	9			10	7	9	9	10			9	8	9	10	8			8	7	8	7					6	8	8	2			161

A = COLIFORM ABSENCE

P = COLIFORM POSITIVE

James W. Kopp, Laboratory Director

MONTHLY REPORT OF TURBIDITY ANALYSIS ON FINISHED WATER

December 2022

PWS ID NO: 6010715
PWS NAME: ST. LOUIS WATER DIVISION
HOWARD BEND WATER TREATMENT PLANT
14769 OLIVE BLVD.
CHESTERFIELD, MISSOURI 63017

CHIEF OPERATOR: MICHAEL J. GALLUZZO

DATE	SAMPLE 1		RAN BY	REPEAT 1		SAMPLE 2		RAN BY	REPEAT 2		SAMPLE 3		RAN BY	REPEAT 3		SAMPLE 4		RAN BY	REPEAT 4		SAMPLE 5		RAN BY	REPEAT 5		SAMPLE 6		RAN BY	REPEAT 6		FINAL DAILY	2-DAY AVG	DNR REP NOTIFIED
	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	RESULTS		
01	12:00	0.02	SF			4:00	0.04	SF			8:00	0.03	CT			12:00	0.03	CT			4:00	0.03	CT			8:00	0.05	RY			0.03	0.03	
02	AM	0.04	RY			AM	0.04	RY			AM	0.03	BD			PM	0.02	BD			PM	0.02	SN			PM	0.03	RY			0.03	0.03	
03	12:00	0.03	RY			4:00	0.02	RY			8:00	0.03	CT			12:00	0.04	CT			4:00	0.03	CT			8:00	0.04	RY			0.03	0.03	
04	AM	0.04	RY			AM	0.04	RY			AM	0.03	SF			PM	0.04	SF			PM	0.05	SF			PM	0.03	CT			0.04	0.04	
05	12:00	0.04	CT			4:00	0.03	CT			8:00	0.03	SF			12:00	0.03	SF			4:00	0.04	SN			8:00	0.04	CT			0.04	0.04	
06	AM	0.05	CT			AM	0.04	CT			AM	0.04	SF			PM	0.04	SF			PM	0.04	SF			PM	0.03	RY			0.04	0.04	
07	12:00	0.04	RY			4:00	0.05	RY			8:00	0.03	BD			12:00	0.03	BD			4:00	0.03	BD			8:00	0.03	RY			0.04	0.04	
08	AM	0.03	RY			AM	0.03	RY			AM	0.03	BD			PM	0.02	BD			PM	0.02	BD			PM	0.02	CT			0.03	0.03	
09	12:00	0.03	CT			4:00	0.03	CT			8:00	0.05	SF			12:00	0.03	SF			4:00	0.05	SF			8:00	0.03	CT			0.04	0.04	
10	AM	0.03	CT			AM	0.03	CT			AM	0.03	SF			PM	0.03	SF			PM	0.04	SF			PM	0.03	CT			0.03	0.03	
11	12:00	0.04	CT			4:00	0.03	CT			8:00	0.03	SF			12:00	0.02	SF			4:00	0.03	SF			8:00	0.03	RY			0.03	0.03	
12	AM	0.03	RY			AM	0.03	RY			AM	0.03	BD			PM	0.03	BD			PM	0.03	BD			PM	0.04	RY			0.03	0.03	
13	12:00	0.04	RY			4:00	0.03	RY			8:00	0.03	BD			12:00	0.03	BD			4:00	0.04	BD			8:00	0.03	CT			0.03	0.03	
14	AM	0.03	CT			AM	0.03	CT			AM	0.05	SF			PM	0.05	SF			PM	0.05	SF			PM	0.03	CT			0.04	0.04	
15	12:00	0.02	CT			4:00	0.02	CT			8:00	0.04	SF			12:00	0.02	SF			4:00	0.04	SF			8:00	0.05	RY			0.03	0.03	
16	AM	0.03	RY			AM	0.04	RY			AM	0.02	BD			PM	0.03	BD			PM	0.03	BD			PM	0.03	RY			0.03	0.03	
17	12:00	0.04	RY			4:00	0.04	RY			8:00	0.03	BD			12:00	0.03	BD			4:00	0.03	BD			8:00	0.03	SF			0.03	0.03	
18	AM	0.05	SF			AM	0.05	SF			AM	0.04	BD			PM	0.04	BD			PM	0.04	BD			PM	0.04	SF			0.04	0.04	
19	12:00	0.05	SF			4:00	0.05	SF			8:00	0.04	CT			12:00	0.05	CT			4:00	0.05	CT			8:00	0.05	SF			0.05	0.05	
20	AM	0.05	SF			AM	0.06	SF			AM	0.05	CT			PM	0.06	CT			PM	0.06	CT			PM	0.07	RY			0.06	0.06	
21	12:00	0.06	RY			4:00	0.07	RY			8:00	0.05	BD			12:00	0.05	BD			4:00	0.04	BD			8:00	0.04	RY			0.05	0.05	
22	AM	0.05	RY			AM	0.05	RY			AM	0.05	BD			PM	0.05	BD			PM	0.06	BD			PM	0.05	SF			0.05	0.05	
23	12:00	0.05	SF			4:00	0.05	SF			8:00	0.05	CT			12:00	0.05	CT			4:00	0.05	CT			8:00	0.06	SF			0.05	0.05	
24	AM	0.05	SF			AM	0.05	SF			AM	0.04	CT			PM	0.05	CT			PM	0.04	CT			PM	0.05	SF			0.05	0.05	
25	12:00	0.05	SF			4:00	0.04	SF			8:00	0.04	CT			12:00	0.04	CT			4:00	0.04	CT			8:00	0.04	RY			0.04	0.04	
26	AM	0.04	RY			AM	0.05	RY			AM	0.03	BD			PM	0.04	BD			PM	0.04	BD			PM	0.05	RY			0.04	0.04	
27	12:00	0.05	RY			4:00	0.05	RY			8:00	0.04	BD			12:00	0.04	BD			4:00	0.05	BD			8:00	0.05	SF			0.05	0.05	
28	AM	0.04	SF			AM	0.03	SF			AM	0.03	CT			PM	0.03	CT			PM	0.05	CT			PM	0.04	SF			0.04	0.04	
29	12:00	0.06	SF			4:00	0.05	SF			8:00	0.04	CT			12:00	0.04	CT			4:00	0.03	CT			8:00	0.04	RY			0.04	0.04	
30	AM	0.05	RY			AM	0.04	RY			AM	0.04	CT			PM	0.03	CT			PM	0.03	CT			PM	0.04	RY			0.04	0.04	
31	12:00	0.03	RY			4:00	0.04	RY			8:00	0.03	BD			12:00	0.04	BD			4:00	0.03	BD			8:00	0.04	RY			0.03	0.03	

( ) SAMPLING POINT
( ) PLANT TAP
(x) COMBINED FILTER EFFLUENT

BA - B. ASKEW
BD - B. DUNN
CT - C. THORNTON
CJ - C. JUNE
DB - D. BUNDREN
DD - D. DOBBS
BG - B. GOEKE
DH - D. HOLMES
JR - J. ROACH
RM - R. MATTINGLY
RW - R. MCWEENEY
RY - R. MONTI
SF - S. FREER
SN - S. NORTHROP
SV - S. VITALE

MONTHLY AVERAGE: 0.04
MONTHLY MAXIMUM: 0.07

MICHAEL J. GALLUZZO
WATER PRODUCTION ENGINEER

MONTHLY REPORT OF TURBIDITY ANALYSIS ON FINISHED WATER

December 2022

PWS ID NO: 6010715
PWS NAME: ST. LOUIS WATER DIVISION
CHAIN OF ROCKS WATER TREATMENT PLANT
10450 RIVERVIEW BLVD.
ST. LOUIS, MISSOURI 63137

CHIEF OPERATOR: FRANK M. GENOVESE

DATE	SAMPLE 1		RAN BY	REPEAT 1		SAMPLE 2		RAN BY	REPEAT 2		SAMPLE 3		RAN BY	REPEAT 3		SAMPLE 4		RAN BY	REPEAT 4		SAMPLE 5		RAN BY	REPEAT 5		SAMPLE 6		RAN BY	REPEAT 6		FINAL DAILY RESULTS	2-DAY AVG	DNR REP NOTIFIED
	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU	TIME	NTU		TIME	NTU			
01	3:00	0.06	RJ			7:00	0.04	AL			11:00	0.04	AL			3:00	0.04	AL			7:00	0.06	RJ			11:00	0.06	RJ			0.05	0.05	
02	AM	0.06	RJ			AM	0.04	KK			AM	0.04	KK			PM	0.04	KK			PM	0.05	WH			PM	0.04	WH			0.05	0.05	
03	3:00	0.04	WH			7:00	0.04	KK			11:00	0.04	KK			3:00	0.04	KK			7:00	0.04	WH			11:00	0.04	WH			0.04	0.04	
04	AM	0.04	WH			AM	0.04	KK			AM	0.04	KK			PM	0.04	KK			PM	0.04	WH			PM	0.04	WH			0.04	0.04	
05	3:00	0.04	WH			7:00	0.04	AL			11:00	0.04	AL			3:00	0.04	AL			7:00	0.06	RJ			11:00	0.06	RJ			0.05	0.05	
06	AM	0.06	RJ			AM	0.04	AL			AM	0.04	AL			PM	0.04	AL			PM	0.06	RJ			PM	0.06	RJ			0.05	0.05	
07	3:00	0.06	RJ			7:00	0.04	KK			11:00	0.04	KK			3:00	0.04	KK			7:00	0.04	WH			11:00	0.05	WH			0.05	0.05	
08	AM	0.06	WH			AM	0.04	KK			AM	0.04	KK			PM	0.04	KK			PM	0.05	WH			PM	0.03	WH			0.04	0.04	
09	3:00	0.03	WH			7:00	0.04	AL			11:00	0.04	AL			3:00	0.04	AL			7:00	0.05	RJ			11:00	0.05	RJ			0.04	0.04	
10	AM	0.06	RJ			AM	0.04	AL			AM	0.04	AL			PM	0.03	AL			PM	0.05	RJ			PM	0.06	RJ			0.05	0.05	
11	3:00	0.06	RJ			7:00	0.04	AL			11:00	0.04	AL			3:00	0.04	AL			7:00	0.06	RJ			11:00	0.05	RJ			0.05	0.05	
12	AM	0.06	WH			AM	0.04	KK			AM	0.04	KK			PM	0.04	KK			PM	0.04	WH			PM	0.04	WH			0.04	0.04	
13	3:00	0.04	WH			7:00	0.04	KK			11:00	0.04	KK			3:00	0.04	KK			7:00	0.03	WH			11:00	0.04	WH			0.04	0.04	
14	AM	0.04	WH			AM	0.04	AL			AM	0.04	TR			PM	0.04	TR			PM	0.05	RJ			PM	0.06	RJ			0.05	0.05	
15	3:00	0.06	RJ			7:00	0.04	AR			11:00	0.05	AR			3:00	0.04	AR			7:00	0.06	RJ			11:00	0.05	RJ			0.05	0.05	
16	AM	0.06	RJ			AM	0.04	KK			AM	0.04	KK			PM	0.04	KK			PM	0.05	WH			PM	0.04	WH			0.05	0.05	
17	3:00	0.04	WH			7:00	0.04	KK			11:00	0.04	KK			3:00	0.04	KK			7:00	0.03	WH			11:00	0.03	WH			0.04	0.04	
18	AM	0.03	WH			AM	0.04	KK			AM	0.04	KK			PM	0.04	KK			PM	0.04	WH			PM	0.04	WH			0.04	0.04	
19	3:00	0.04	WH			7:00	0.04	AL			11:00	0.04	AL			3:00	0.04	AL			7:00	0.06	RJ			11:00	0.05	RJ			0.05	0.05	
20	AM	0.06	RJ			AM	0.04	AL			AM	0.04	AL			PM	0.04	AL			PM	0.06	RJ			PM	0.07	RJ			0.05	0.05	
21	3:00	0.06	RJ			7:00	0.04	KK			11:00	0.04	KK			3:00	0.04	KK			7:00	0.05	WH			11:00	0.04	WH			0.05	0.05	
22	AM	0.06	WH			AM	0.06	KK			AM	0.05	KK			PM	0.05	KK			PM	0.04	WH			PM	0.06	WH			0.05	0.05	
23	3:00	0.06	WH			7:00	0.06	KK			11:00	0.05	KK			3:00	0.05	KK			7:00	0.06	RJ			11:00	0.06	RJ			0.06	0.06	
24	AM	0.06	RJ			AM	0.05	AL			AM	0.05	AL			PM	0.06	AL			PM	0.06	RJ			PM	0.08	RJ			0.06	0.06	
25	3:00	0.06	RJ			7:00	0.06	KK			11:00	0.05	KK			3:00	0.06	KK			7:00	0.08	RJ			11:00	0.07	RJ			0.06	0.06	
26	AM	0.07	RJ			AM	0.06	KK			AM	0.06	KK			PM	0.05	KK			PM	0.06	WH			PM	0.06	WH			0.06	0.06	
27	3:00	0.06	WH			7:00	0.06	KK			11:00	0.05	KK			3:00	0.05	KK			7:00	0.05	WH			11:00	0.05	WH			0.05	0.05	
28	AM	0.05	WH			AM	0.06	AL			AM	0.05	AL			PM	0.05	AR			PM	0.06	RJ			PM	0.06	RJ			0.06	0.06	
29	3:00	0.07	RJ			7:00	0.04	AL			11:00	0.06	AL			3:00	0.05	AL			7:00	0.06	RJ			11:00	0.06	RJ			0.06	0.06	
30	AM	0.06	RJ			AM	0.05	KK			AM	0.06	KK			PM	0.05	KK			PM	0.05	WH			PM	0.04	WH			0.05	0.05	
31	3:00	0.04	WH			7:00	0.04	KK			11:00	0.05	KK			3:00	0.05	KK			7:00	0.05	WH			11:00	0.05	WH			0.05	0.05	

( ) SAMPLING POINT
( ) PLANT TAP
(x) COMBINED FILTER EFFLUENT

JG - J. GONZALEZ
WH - W. HARMON
LH - L. HENDERSON
RJ - R. JINES
KK - K. KOHLBERG
AL - A. LOPEZ
RM - R. McWEENEY, JR.
WP - W. PHEGLEY
TR - T. REYNOLDS
LR - L. ROBINSON
AR - A. ROUNDS
ALR - A. RULO
AS - A. SARKIS
CS - C. SCANDRETT-LEATHERMAN

MONTHLY AVERAGE: 0.05
MONTHLY MAXIMUM: 0.08

FRANK M. GENOVESE
WATER PRODUCTION EXECUTIVE

DISINFECTION AND TURBIDITY REPORT
CITY OF ST. LOUIS - DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION
DISINFECTION AND TURBIDITY REPORT
FOR SURFACE WATER SYSTEMS > 10,000 POPULATION

PWS NAME	PWS-ID	MONTH
City of St. Louis, Water Division, Howard Bend WTP	6010715	December
ADDRESS	**PHONE**	**YEAR**
14769 Olive Blvd.	(314) 469-1900	2022
CITY / **ZIP CODE**	**COUNTY**	
Chesterfield / 63017	St. Louis City	

DISTRIBUTION DISINFECTION

1. Number of samples analyzed, A: **161**
   (Combined number for C/R & H/B Plants)
2. Number of samples below 0.2 mg/L, B: **0**
   [(A-B)/A] x 100 = C: **100** % meeting minimum disinfection required
3. Avg. disinfectant residual for the month: **2.79** mg/l

COMBINED FILTER EFFLUENT TURBIDITY

1. Total number measurements taken monthly, A: **186**
2. Number of measurements below 0.15 NTU, B: **186**
   [B/A] X 100 = C: **100** % meeting turbidity requirements

TWO-STAGE LIME SOFTENING

1.Did chemical addition and hardness precipitation occur in two separate sequential softening stages prior to filtration? **YES**

2.Did 100% of plant flow through lime softening stages? **YES**

DATE	HOURS OF OPERATION	FINISHED WATER TEMPERATURE (°C)	LOWEST RESIDUAL DISINFECTANT AT ENTRANCE TO DIST. SYSTEM (mg/L) o FREE x CHLORAMINES	HIGHEST TURBIDITY MEASUREMENT OF THE DAY	DURATION RESIDUAL DISINFECTANT FELL BELOW 0.5 MG FREE CL2 OR 1 mg/L CHLORAMINES	VALUE OF COMBINED FILTER EFFLUENT TURBIDITY MEASUREMENTS WHICH EXCEED 1 NTU	5 NTU
1	24	8	2.80	0.05	0	0	0
2	24	8	2.56	0.04	0	0	0
3	24	8	2.61	0.04	0	0	0
4	24	8	2.43	0.05	0	0	0
5	24	7	2.63	0.04	0	0	0
6	24	8	2.46	0.05	0	0	0
7	24	8	2.62	0.05	0	0	0
8	24	8	2.60	0.03	0	0	0
9	24	9	2.60	0.05	0	0	0
10	24	9	2.62	0.04	0	0	0
11	24	9	2.67	0.04	0	0	0
12	24	9	2.56	0.04	0	0	0
13	24	9	2.51	0.04	0	0	0
14	24	9	2.61	0.05	0	0	0
15	24	9	2.65	0.05	0	0	0
16	24	9	2.50	0.04	0	0	0
17	24	8	2.61	0.04	0	0	0
18	24	7	2.60	0.05	0	0	0
19	24	6	2.64	0.05	0	0	0
20	24	6	2.58	0.07	0	0	0
21	24	7	2.62	0.07	0	0	0
22	24	6	2.47	0.06	0	0	0
23	24	3	2.78	0.06	0	0	0
24	24	2	3.01	0.05	0	0	0
25	24	2	2.98	0.05	0	0	0
26	24	2	2.64	0.05	0	0	0
27	24	2	2.35	0.05	0	0	0
28	24	2	2.63	0.05	0	0	0
29	24	3	2.71	0.06	0	0	0
30	24	5	2.86	0.05	0	0	0
31	24	7	2.76	0.04	0	0	0

NAME OF PERSON PREPARING REPORT	SIGNATURE OF RESPONSIBLE OFFICIAL	DATE
Michael J. Galluzzo P.E.	Michael J. Galluzzo	01/03/23

DISINFECTION AND TURBIDITY REPORT
CITY OF ST. LOUIS - DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION
DISINFECTION AND TURBIDITY REPORT
FOR SURFACE WATER SYSTEMS > 10,000 POPULATION

PWS NAME		PWS-ID	MONTH
City of St. Louis, Water Division, Howard Bend WTP		6010715	December
ADDRESS		PHONE	YEAR
14769 Olive Blvd		(314) 469-1900	2022
CITY	ZIP CODE	COUNTY	
Chesterfield	63017	City of St. Louis	

INDIVIDUAL FILTER MONITORING & REPORTING:

1. Was each filter continuously monitored for turbidity and results recorded every 15 minutes? **x** yes ____ no
2. Was there a failure of the continuous turbidity monitoring equipment? ____ yes **x** no
   If yes, was the equipment repaired within 5 working days? ____ yes ____ no
   If yes, was grab sampling done every four hours until failure corrected? ____ yes ____ no
3. Was any individual filter turbidity level > 0.5 NTU in two consecutive measurements taken 15 minutes apart at the end of the first 4 hours of operation after the filter has been back washed or otherwise taken off line? ____ yes **x** no
   If yes, perform follow-up actions steps 1, 2, and 3
4. Was any individual filter turbidity level > 1.0 NTU in two consecutive measurements taken 15 minutes apart? ____ yes **x** no
   If yes, perform follow-up actions steps 1, 2, and 3
5. Was any individual filter turbidity level > 1.0 NTU in two consecutive measurements taken 15 minutes apart in each of 3 consecutive months? ____ yes **x** no
   If yes, perform follow-up actions steps 1, 2, and 3
6. Was any individual filter turbidity level > 2.0 NTU in two consecutive measurements taken 15 minutes apart in 2 consecutive months? ____ yes **x** no
   If YES, perform follow-up action steps 1, 5

FOLLOW-UP ACTIONS to PERFORM:

1. Report filter numbers, turbidity measurements and dates the exceedances occurred.
2. Produce a filter profile within seven days of the exceedance (if there is no obvious reason for the exceedence
3. Report that filter profile has been produced and is available for inspection, or identify and report in writing reason for the exceedance.
4. Conduct a self-assessment of the filters within 14 days of the exceedance and report that the findings are available for inspection.
5. Contact MoDNR no later than 30 days following the exceedance, and arrange for a Comprehensive Performance Evaluation of your system. The evaluation must be submitted to the department within 90 days following the exceedance.

The Missouri Department of Natural Resources-Public Drinking Water Branch recommends contacting your local regional office if any individual filter exceeds 0.5 NTU, the lowest trigger in the individual filter

COMMENTS:

DISINFECTION AND TURBIDITY REPORT
CITY OF ST. LOUIS - DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION
DISINFECTION AND TURBIDITY REPORT FOR SURFACE WATER SYSTEMS
> 10,000 POPULATION

PWS NAME	PWS-ID	MONTH
City of St. Louis, Water Division, Chain of Rocks WTP	6010715	December
ADDRESS	**PHONE**	**YEAR**
10450 Riverview	(314) 592-8200	2022
CITY / **ZIP CODE**	**COUNTY**	
St. Louis / 63137	City of St. Louis	

DISTRIBUTION DISINFECTION

1. Number of samples analyzed, A: **161**
   (Combined number for C/R & H/B Plants)
2. Number of samples below 0.2 mg/L, B: **0**
   [(A-B)/A] x 100 = C: **100** % meeting minimum disinfection required
3. Avg. disinfectant residual for the month: **2.79** mg/l

COMBINED FILTER EFFLUENT TURBIDITY

1. Total number measurements taken monthly, A: **184**
2. Number of measurements below 0.15 NTU, B: **184**
   [B/A] X 100 = C: **100** % meeting turbidity requirements

TWO-STAGE LIME SOFTENING

1. Did chemical addition and hardness precipitation occur in two separate sequential softening stages prior to filtration? **YES**
2. Did 100% of plant flow through lime softening stages? **YES**

DATE	HOURS OF OPERATION	FINISHED WATER TEMPERATURE (°C)	LOWEST RESIDUAL DISINFECTANT AT ENTRANCE TO DIST. SYSTEM (mg/L) o FREE x CHLORAMINES	HIGHEST TURBIDITY MEASUREMENT OF THE DAY	DURATION RESIDUAL DISINFECTANT FELL BELOW 0.5 MG FREE CL2 OR 1 mg/L CHLORAMINES	VALUE OF COMBINED FILTER EFFLUENT TURBIDITY MEASUREMENTS WHICH EXCEED 1 NTU	5 NTU
1	24	8	2.50	0.06	0	0	0
2	24	7	2.56	0.06	0	0	0
3	24	7	2.62	0.04	0	0	0
4	24	7	2.67	0.04	0	0	0
5	24	7	2.60	0.06	0	0	0
6	24	7	2.56	0.06	0	0	0
7	24	7	2.60	0.06	0	0	0
8	24	7	2.62	0.06	0	0	0
9	24	7	2.58	0.05	0	0	0
10	24	8	2.42	0.06	0	0	0
11	24	8	2.69	0.06	0	0	0
12	24	8	2.54	0.06	0	0	0
13	24	7	2.65	0.04	0	0	0
14	24	7	2.69	0.06	0	0	0
15	24	7	2.60	0.06	0	0	0
16	24	7	2.68	0.06	0	0	0
17	24	7	2.68	0.04	0	0	0
18	24	6	2.64	0.04	0	0	0
19	24	6	2.57	0.06	0	0	0
20	24	5	2.83	0.07	0	0	0
21	24	5	2.82	0.06	0	0	0
22	24	5	2.73	0.06	0	0	0
23	24	3	2.69	0.06	0	0	0
24	24	2	2.58	0.08	0	0	0
25	24	2	2.65	0.08	0	0	0
26	24	2	2.65	0.07	0	0	0
27	24	2	2.62	0.06	0	0	0
28	24	2	2.60	0.06	0	0	0
29	24	2	2.63	0.07	0	0	0
30	24	2	2.65	0.06	0	0	0
31	24	2	2.70	0.05	0	0	0

NAME OF PERSON PREPARING REPORT	SIGNATURE OF RESPONSIBLE OFFICIAL	DATE
Frank M. Genovese	Frank M. Genovese	01/01/23

DISINFECTION AND TURBIDITY REPORT
CITY OF ST. LOUIS - DEPARTMENT OF PUBLIC UTILITIES
WATER DIVISION
DISINFECTION AND TURBIDITY REPORT FOR SURFACE WATER SYSTEMS
> 10,000 POPULATION

PWS NAME		PWS-ID	MONTH
City of St. Louis, Water Division, Chain of Rocks WTP		6010715	December
ADDRESS		PHONE	YEAR
10450 Riverview		(314) 592-8200	2022
CITY	ZIP CODE	COUNTY	
St. Louis	63137	City of St. Louis	

INDIVIDUAL FILTER MONITORING & REPORTING:

1. Was each filter continuously monitored for turbidity and results recorded every 15 minutes? x yes ___ no
2. Was there a failure of the continuous turbidity monitoring equipment? ___ yes x no
   If yes, was the equipment repaired within 5 working days? ___ yes ___ no
   If yes, was grab sampling done every four hours until failure corrected? ___ yes ___ no
3. Was any individual filter turbidity level > 0.5 NTU in two consecutive measurements taken 15 minutes apart at the end of the first 4 hours of operation after the filter has been back washed or otherwise taken off line? ___ yes x no
   If yes, perform follow-up actions steps 1, 2, and 3
4. Was any individual filter turbidity level > 1.0 NTU in two consecutive measurements taken 15 minutes apart? ___ yes x no
   If yes, perform follow-up actions steps 1, 2, and 3
5. Was any individual filter turbidity level > 1.0 NTU in two consecutive measurements taken 15 minutes apart in each of 3 consecutive months? ___ yes x no
   If yes, perform follow-up actions steps 1, 2, and 3
6. Was any individual filter turbidity level > 2.0 NTU in two consecutive measurements taken 15 minutes apart in 2 consecutive months? ___ yes x no
   If yes, perform follow-up action steps 1, 5

FOLLOW-UP ACTIONS to PERFORM:

1. Report filter numbers, turbidity measurements and dates the exceedances occurred.
2. Produce a filter profile within seven days of the exceedance (if there is no obvious reason for the exceedence.)
3. Report that filter profile has been produced and is available for inspection, or identify and report in writing reason for the exceedance.
4. Conduct a self-assessment of the filters within 14 days of the exceedance and report that the findings are available for inspection.
5. Contact MoDNR no later than 30 days following the exceedance, and arrange for a Comprehensive Performance Evaluation of your system. The evaluation must be submitted to the department within 90 days following the exceedance.

The Missouri Department of Natural Resources-Public Drinking Water Branch recommends contacting your local regional office if any individual filter exceeds 0.5 NTU, the lowest trigger in the individual filter

COMMENTS:

SUMMARY OF MONTHLY CHEMICAL ANALYSIS ON FINISHED WATER
CITY OF ST. LOUIS WATER DIVISION
DISTRIBUTION RESIDUAL CHLORINE mg/L
LABORATORY CERTIFICATION NO. 00241

MONTH: **December-2022** I.D. NO. 6010715

Sample I.D. #	LOCATION	(DATE) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	# of Samples	AVG
D01	1640 S. KINGSHIGHWAY	2.71	2.79			2.62	2.64	2.63	2.60	2.60			2.86	2.83	2.97	2.71	2.97			2.79	2.98	2.84	2.84					2.66	2.78	2.79	3.05		20	2.78
D02	10450 RIVERVIEW DR.	3.00	3.00			2.81	2.84	2.83	2.80	2.78			3.01	3.02	3.03	3.04	3.02			3.00	3.22	3.01	2.89					2.81	3.00	3.04	3.24		20	2.97
D03	1229 MCCAUSLAND	2.86	2.80			2.60	2.60	2.45	2.26	2.39			2.64	2.61	2.62	2.63	2.62			2.60	2.59	2.42	2.61					2.77	2.47	2.65			19	2.59
D06	5000 S. KINGSHIGHWAY		2.56			2.80		2.60		2.60				2.80		2.69				2.79		2.79	2.86										9	2.72
D08	4810 ENRIGHT	2.87				2.65	2.78		2.47				2.83		2.82															2.82			7	2.75
D09	2224 S. 7TH	2.72	2.46					2.79	2.61	2.62			2.46	2.81	2.62	2.80	2.62			2.80	2.39	2.58						2.65	2.37	2.78			16	2.63
D10	314 TUCKER	2.84	2.82			2.81	2.80	2.79	2.62	2.66			2.86	2.98	3.03	3.03	3.03			2.86	2.99	2.83	2.98					2.80	2.54				18	2.85
D11	2137 SULPHUR																																	
D12	4510 MARGARETTA								2.46						2.85		2.82				2.83												4	2.74
D13	8227 S. BROADWAY					2.78		2.62		2.59						2.80													2.78				5	2.72
D14	8300 N. BROADWAY	2.85	2.84			2.82	2.82			2.80			2.87		3.05	3.01	3.03			2.99			3.01							2.99			12	2.92
D15	4408 DONOVAN		2.80			2.61		2.59		2.43				2.61		2.79				2.80		2.63	2.76						2.75				10	2.68
D16	1400 SHAWMUT	2.86							2.79				3.00		3.00															2.96			5	2.92
D18	1501 SALISBURY																																	
D20	4233 GRACE																																	
D21	5412 JAMIESON																																	
D24	5020 CREIGHTON DR.																																	
D28	3523 MAGNOLIA	2.86	2.83			2.80	2.83	2.83	2.67	2.80			3.03	2.96		3.01	3.05				3.03	2.95						2.76	2.79	2.98			16	2.89
D30	NOT ASSIGNED																																	
D31	NOT ASSIGNED																																	
D32	NOT ASSIGNED																																	
D33	NOT ASSIGNED																																	
D34	NOT ASSIGNED																																	
TOTAL #		9	9			10	7	9	9	10			9	8	9	10	8			8	7	8	7					6	8	8	2		161	
AVERAGE		2.84	2.77			2.73	2.76	2.68	2.59	2.63			2.84	2.83	2.89	2.85	2.89			2.83	2.86	2.75	2.85					2.74	2.69	2.88	3.14			2.79

Mr. James W. Kopp
Chemistry Supervisor - Howard Bend Lab

City of St. Louis Water Division, PWS ID No. MO6010715
Monthly Total Organic Carbon (TOC) Removal Monitoring
Howard Bend Laboratory, Certificate #00241
Q4 2022

Chain of Rocks Water Treatment Plant
10450 Riverview Dr.
St. Louis, MO 63137
PWS ID No: 6010715

Month	Sample Date	Analysis Date	River Water (CRRW)		CRCW TOC (mg/L)	Actual % TOC Removal	Required % TOC Removal	RAA (Last 4 Quarters)
			Alkalinity (mg/L)	TOC (mg/L)				
January	Jan - 22	Jan - 22	232	3.24	2.77	16.0	15.0	
February	Feb - 22	Feb - 22	193	3.82	2.72	27.7	15.0	
March	Mar -22	Mar - 22	176	3.91	2.89	24.1	15.0	26.9
April	Apr - 22	Apr - 22	160	3.98	3.06	22.4	15.0	
May	May - 22	May - 22	146	4.87	3.14	34.9	25.0	
June	Jun - 22	Jun - 22	151	4.73	3.21	31.9	25.0	26.3
July	Jul - 22	Jul - 22	243	4.36	3.11	28.1	25.0	
August	Aug - 22	Aug - 22	213	4.24	3.06	27.1	25.0	
September	Sep - 22	Sep - 22	182	3.60	2.91	19.2	15.0	25.1
October	Oct - 22	Oct - 22	179	3.66	3.04	18.6	15.0	
November	Nov - 22	Nov - 22	177	3.42	2.91	17.7	15.0	
December	Dec - 22	Dec - 22	190	3.64	2.80	22.0	15.0	24.3

Source Water: CRRW- Chain of Rocks River Water
Finished Water: CRCW- Chain of Rocks Clear Well
RAA: Running Annual Average of quarterly % TOC removal for the last 4 quarters

James W. Kopp
Chemistry Supervisor

City of St. Louis Water Division, PWS ID No. MO6010715
Monthly Total Organic Carbon (TOC) Removal Monitoring
Howard Bend Laboratory, Certificate #00241
Q4 2022

Howard Bend Water Treatment Plant
14769 Olive Blvd.
Chesterfield, MO 63017
PWS ID No: 6010715

Month	Sample Date	Analysis Date	River Water (HBRW)		HBCW TOC (mg/L)	Actual % TOC Removal	Required % TOC Removal	RAA (Last 4 Quarters)
			Alkalinity (mg/L)	TOC (mg/L)				
January	Jan - 22	Jan - 22	218	3.26	2.74	16.8	15.0	
February	Feb - 22	Feb - 22	194	3.61	2.65	25.5	15.0	
March	Mar - 22	Mar - 22	176	3.82	2.69	28.1	15.0	26.5
April	Apr - 22	Apr - 22	155	3.94	2.92	25.5	15.0	
May	May - 22	May - 22	141	4.82	3.05	36.4	25.0	
June	Jun - 22	Jun - 22	145	4.65	3.00	35.3	25.0	26.3
July	Jul - 22	Jul - 22	174	4.20	2.76	34.2	25.0	
August	Aug - 22	Aug - 22	173	4.00	2.87	28.2	25.0	
September	Sep - 22	Sep - 22	180	3.54	2.72	22.9	15.0	26.6
October	Oct - 22	Oct - 22	181	3.63	3.05	16.3	15.0	
November	Nov - 22	Nov - 22	183	3.29	2.60	20.6	15.0	
December	Dec - 22	Dec - 22	199	3.88	2.91	24.1	15.0	26.3

Source Water: HBRW- Howard Bend River Water
Finished Water: HBCW- Howard Bend Clear Well
RAA: Running Annual Average of quarterly % TOC removal for the last 4 quarters

James W. Kopp
Chemistry Supervisor

CITY OF ST. LOUIS WATER DIVISION
MISSOURI DEPARTMENT OF NATURAL RESOURCES
PUBLIC DRINKING WATER PROGRAM
P.O. BOX 176
JEFFERSON CITY, MO 65102

CITY OF ST. LOUIS WATER DIVISION

QUARTERLY TOTAL TRIHALOMETHANES & HALOACETIC ACIDS MONITORING

TTHM/HAA5 (ppb)

PWS ID NO: 6010715

Q4 2022

TAP LOCATION	Plant	LOCATION TYPE	Q1 2022 QUARTER DUE March 31		Q2 2022 QUARTER DUE June 30		Q3 2022 QUARTER DUE September 30		Q4 2022 QUARTER DUE December 31		RUNNING 12 MONTHLY AVERAGE PER SITE	
			TTHM	HAA5	TTHM	HAA5	TTHM	HAA5	TTHM	HAA5	TTHM	HAA5
DATE COLLECTED			03/01/22	03/01/22	06/08/22	06/08/22	09/20/22	09/20/22	12/05/22	12/05/22		
DATE ANALYZED			3/3/2022	3/4/2022	06/10/2022	06/10/2022	9/15/22	9/10/22	12/12/22	12/8/22		
1640 S. KINGSHIGHWAY (#1)	Howard Bend	Mid Point	13.7	20.5	13.9	29.7	8.6	21.4	4.5	7.8	10.2	19.9
10450 RIVERVIEW (#2)	Chain of Rocks	Entry Point	6.3	13.1	16.6	32.5	13.6	22.5	5.5	7.7	10.5	19.0
1229 MCCAUSLAND (#3)	Howard Bend	Entry Point	16.6	21.9	13.3	29.4	8.5	21.3	3.6	8.1	10.5	20.2
5000 S. KINGSHIGHWAY BLVD. (#6)	Howard Bend	End Point	14.1	20.6	14.4	30.8	10.9	22.3	4.3	8.3	10.9	20.5
4810 ENRIGHT (#8)	Howard Bend	Mid Point	8.3	16.6	17.3	33.1	11.3	23.4	4.2	6.9	10.3	20.0
314 S. TUCKER BLVD (#10)	Chain of Rocks	Mid Point	6.9	15.3	18.3	33.9	14.1	24.8	5.1	8.1	11.1	20.5
4510 MARGARETTA (#12)	Chain of Rocks	Mid Point	8.7	15.1	15.0	31.4	10.1	22.6	4.4	8.1	9.6	19.3
8227 S. BROADWAY (#13)	Chain of Rocks	End Point	16.1	21.6	14.1	31.0	11.8	22.4	4.2	8.0	11.6	20.8
8300 N. BROADWAY (#14)	Chain of Rocks	Mid Point	6.5	13.8	20.4	35.9	13.9	22.5	5.3	7.7	11.5	20.0
4408 DONOVAN (#15)	Howard Bend	Mid Point	16.0	15.5	14.3	30.7	9.2	22.1	3.9	7.5	10.9	19.0
1501 SALISBURY (#18)	Chain of Rocks	Mid Point	7.8	22.1	18.4	34.0	14.5	24.1	4.6	8.2	11.3	22.1
3523 MAGNOLIA (#28)	Howard Bend	Mid Point	6.3	13.1	19.6	34.5	13.7	23.4	5.5	7.2	11.3	19.6

CHAIN OF ROCKS LABORATORY REPORT