

NAME OF WATER UTILITY KINGSTON WATER DEPARTMENT  
 NAME OF WATER TREATMENT PLANT: KINGSTON WATER PLANT  
 COUNTY ROANE PWSID # 360

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 Division of Water Supply  
 COMPREHENSIVE MONTHLY OPERATION REPORT

MONTH OF October YEAR 2023

DATE	RAW WATER TREATED - 1,000 GALLONS	FINISHED WATER PUMPED TO SYSTEM - 1,000 GALLONS	RAW WATER TEMPERATURE °C	PHYSICAL AND CHEMICAL CHARACTERISTICS																								CHEMICALS USED																										
				TURBIDITY						CHLORINE RESIDUAL MG/L			ALKALINITY MG/L			pH		HARDNESS MG/L		PO4 MG/L	H2O2 MG/L	IRON MG/L	MANGANESE MG/L		FLUORIDE MG/L			POUNDS PER 24 HOURS						CALCULATED DOSAGE MG/L																				
				FINISHED WATER TURBIDITY MUST BE MEASURED EVERY 4 HOURS AND RECORDED EVERY AM PM						ON TOP OF FILTER	LOWEST PLANT EFFLUENT	TOTAL RAW	PHENOLPHTHALEIN FINISHED	TOTAL FINISHED	RAW	FINISHED	RAW	FINISHED	FINISH	DISTRIBUTION	IN/L/MIN	ENDPOINT RESIDUAL	FINISH	RAW	FINISH	DIST. SYSTEM	RAW	FINISHED	DISTRIBUTION SYSTEM	EC675	COAGULANT - COAGULANT AID	DISINFECTION	PRE 12.5% BLEACH	DISINFECTION	POST 12.5% BLEACH	pH ADJUSTMENT	FLUORIDE	H2O2 TASTE AND ODOR	MINERAL SOFTENING OXIDATION	SEAQUEST STABILIZATION AND CORROSION CONTROL PO4	COAGULANT - COAGULANT AID	DISINFECTION	pH ADJUSTMENT	FLUORIDE	TASTE AND ODOR	OXIDATION	STABILIZATION AND CORROSION CONTROL / PO4							
				RAW	12-4	4-8	8-12	12-4	4-8	8-12																																												
1	510	426	25	3.60		0.07	0.06	0.10			0.7	2.5	64.0		63.0	7.5	7.6	64.0	68.0	0.4	0.3	3.8	0.2	0.00	0.06	0.01	0.01			0.5	0.5	62.0	121.0	121.0							2.6	14.6	7.1		0.6	0.16	0.81	0.7						
2	610	612	25	4.92		0.07	0.07	0.07			0.9	2.7	61.0		68.0	7.3	7.5	64.0	64.0	0.4	0.4	3.8	0.2							0.5	0.5	69.0	145.0	160.0							3.2	13.6	7.5		0.5	0.16	0.82	0.6						
3	432	438	25	3.10		0.06	0.06				0.6	2.1	60.0		65.0	7.5	7.5	60.0	64.0	0.2	0.1	3.8	0.2							0.5	0.5	48.0	99.0	104.0							2.2	13.3	7.0		0.5	0.16	0.81	0.6						
4	565	566	25	3.28		0.06	0.06	0.06			1.4	2.7	60.0		65.0	7.3	7.5	60.0	68.0	0.1	0.2	3.8	0.2							0.5	0.5	62.0	138.0	153.0							3.0	13.2	7.7		0.5	0.16	0.82	0.6						
5	490	494	25	3.13		0.06	0.06				1.7	2.6	60.0		60.0	7.7	7.5	60.0	60.0	0.1	0.1	3.8	0.2							0.5	0.5	49.0	115.0	121.0							2.5	12.0	7.2		0.5	0.16	0.80	0.6						
6	460	460	25	3.01		0.06	0.06				1.7	2.5	60.0		64.0	7.5	7.5	60.0	70.0	0.1	0.1	3.8	0.2							0.5	0.5	45.0	112.0	125.0							2.4	11.7	7.7		0.5	0.16	0.82	0.6						
7	378	380	25	3.71		0.06	0.06	0.06			0.9	2.8	69.0		75.0	7.6	7.6	72.0	68.0	0.2	0.2	3.8	0.2	0.00	0.06	0.02	0.02			0.5	0.5	35.0	88.0	101.0							1.9	11.1	7.5		0.4	0.16	0.80	0.6						
8	367	365	24	3.69		0.06	0.06	0.06			1.2	2.8	68.0		71.0	7.6	7.6	68.0	68.0	0.3	0.2	3.8	0.2	0.00	0.06	0.01	0.02			0.5	0.6	35.0	90.0	101.0							1.9	11.4	7.8		0.5	0.16	0.82	0.6						
9	608	617	24	3.46	0.07		0.06		0.07	0.07	1.0	2.8	70.0		76.0	7.5	7.5	74.0	68.0	0.2	0.2	3.8	0.2							0.5	0.5	58.0	143.0	164.0							3.1	11.4	7.6		0.5	0.16	0.81	0.6						
10	602	508	24	3.62			0.10	0.08	0.09	0.08	1.1	2.8	73.0		75.0	7.5	7.5	74.0	70.0	0.1	0.2	3.8	0.2							0.5	0.5	58.0	148.0	154.0							3.2	11.6	7.5		0.5	0.17	0.83	0.8						
11	344	349	24	3.91					0.08	0.08	0.6	2.6	68.0		70.0	7.4	7.5	70.0	70.0	0.1	0.1	3.8	0.2							0.5	0.7	32.0	82.0	83.0							1.8	11.2	7.2		0.4	0.16	0.81	0.6						
12	419	421	24	3.72			0.07	0.07		0.07	1.2	2.7	70.0		70.0	7.6	7.7	72.0	70.0	0.1	0.2	3.8	0.2							0.5	0.6	40.0	102.0	120.0							2.2	11.4	7.9		0.5	0.17	0.83	0.6						
13	683	690	24	3.88			0.07		0.07	0.07	0.5	2.6	75.0		79.0	7.5	7.6	78.0	80.0	0.1	0.2	3.8	0.2							0.5	0.5	66.0	161.0	187.0							3.5	11.6	7.6		0.4	0.16	0.80	0.6						
14	682	686	24	3.87	0.07			0.07		0.08	0.8	2.5	76.0		77.0	7.5	7.6	76.0	78.0	0.2	0.2	3.8	0.2	0.00	0.06	0.01	0.02			0.5	0.5	66.0	126.0	182.0							3.6	11.6	6.8		0.4	0.16	0.82	0.6						
15	478	486	24	3.97			0.09		0.08	0.07	0.9	2.3	75.0		74.0	7.5	7.6	76.0	76.0	0.2	0.1	3.8	0.2	0.01	0.06	0.01	0.01			0.5	0.5	43.0	119.0	132.0							2.5	10.8	7.9		0.4	0.16	0.81	0.6						
16	594	599	23	4.18		0.07	0.07	0.08			0.8	3.0	75.0		75.0	7.5	7.5	76.0	78.0	0.2	0.2	3.8	0.2							0.5	0.5	55.0	157.0	171.0							3.1	11.1	8.3		0.5	0.17	0.83	0.6						
17	511	415	21	4.34		0.08	0.08	0.11			1.1	2.7	78.0		80.0	7.6	7.6	80.0	82.0	0.3	0.4	3.8	0.2							0.6	0.6	49.0	132.0	126.0							2.6	11.5	7.6		0.5	0.16	0.81	0.8						
18	528	532	21	4.15		0.08	0.08			0.08	1.3	2.7	75.0		75.0	7.6	7.6	80.0	80.0	0.1	0.1	3.8	0.2							0.6	0.6	39.0	136.0	151.0							2.8	8.9	8.1		0.5	0.17	0.82	0.6						
19	534	543	21	3.46		0.08	0.08	0.07			1.4	2.6	80.0		81.0	7.7	7.6	84.0	88.0	0.1	0.2	3.8	0.2							0.5	0.5	58.0	138.0	153.0							2.8	13.0	8.2		0.4	0.16	0.81	0.6						
20	466	470	21	3.35		0.07	0.06				1.4	2.9	80.0		80.0	7.7	7.5	80.0	80.0	0.1	0.2	3.8	0.2							0.6	0.6	49.0	114.0	136.0							2.5	12.6	8.0		0.5	0.17	0.83	0.6						
21	543	551	21	3.47			0.07	0.07			1.2	3.3	78.0		77.0	7.6	7.6	80.0	78.0	0.2	0.2	3.8	0.2	0.01	0.06	0.01	0.01			0.5	0.6	57.0	133.0	148.0							2.8	12.6	7.8		0.4	0.16	0.81	0.6						
22	420	422	21	3.31			0.07	0.07			1.3	3.0	82.0		81.0	7.7	7.7	78.0	82.0	0.3	0.2	3.8	0.2	0.01	0.06	0.01	0.01			0.6	0.6	46.0	104.0	118.0							2.2	13.1	7.9		0.5	0.16	0.82	0.6						
23	602	612	21	2.97		0.07	0.08	0.11			0.6	3.1	80.0		80.0	7.7	7.6	82.0	84.0	0.1	0.1	3.8	0.2							0.6	0.6	64.0	142.0	164.0							3.1	12.7	7.6		0.5	0.16	0.81	0.6						
24	688	585	21	3.04		0.10	0.11	0.11			0.3	2.8	79.0		81.0	7.9	7.7	86.0	86.0	0.3	0.2	3.8	0.2							0.6	0.5	83.0	161.0	177.0							3.6	14.5	7.4		0.5	0.17	0.83	0.7						
25	479	487	21	3.34		0.08	0.08			0.09	0.9	2.6	80.0		80.0	7.9	7.7	80.0	80.0	0.2	0.1	3.8	0.2							0.6	0.7	54.0	111.0	131.0							2.5	13.5	7.6		0.5	0.16	0.81	0.6						
26	529	534	21	3.31		0.07	0.07	0.07			1.3	2.7	80.0		80.0	7.8	7.7	80.0	80.0	0.1	0.2	3.8	0.2							0.6	0.6	60.0	122.0	146.0							2.8	13.6	7.6		0.4	0.17	0.83	0.6						
27	510	519	21	2.94		0.07	0.07				1.3	2.5	80.0		80.0	7.8	7.7	80.0	80.0	0.1	0.1	3.8	0.2							0.6	0.6	58.0	116.0	136.0							2.6	13.6	7.4		0.5	0.16	0.81	0.6						
28	515	518	21	3.01		0.07	0.07	0.07			1.0	2.7	80.0		80.0	7.8	7.7	80.0	80.0	0.2	0.2	3.8	0.2	0.00	0.06	0.01	0.01			0.6	0.6	59.0	119.0	140.0							2.7	13.7	7.5		0.5	0.16	0.82	0.6						
29	491	498	22	3.02			0.08	0.08			1.1	2.5	81.0		83.0	8.0	7.8	84.0	86.0	0.2	0.2	3.8	0.2	0.01	0.06	0.01	0.01			0.6	0.5	58.0	105.0	130.0							2.5	14.2	7.2		0.5	0.16	0.81	0.6						
30	684	594	21	3.27		0.09	0.10	0.09			0.7	2.7	81.0		80.0	7.6	7.6	82.0	80.0	0.2	0.2	3.8	0.2							0.5	0.5	73.0	152.0	171.0							3.6	12.8	7.1		0.5	0.17	0.83	0.7						
31	359	364	21	3.41		0.09	0.09				0.8	2.3	80.0		80.0	7.5	7.7	80.0	80.0	0.1	0.1	3.8	0.2							0.5	0.5	34.0	77.0	99.0							1.9	11.4	7.3		0.5	0.16	0.81	0.6						
TOTAL	16081	15741	706	109.44	0.14	1.52	2.15	1.50	0.39	0.52	31.7	83.1	2278.0		2325.0	235.7	235.5	2320.0	2346.0	5.3	5.4	116.3	6.2	0.04	0.54	0.11	0.11	0.3	16.4	16.8	1664.																							

DATE	RAW WATER TREATED - 1,000 GALLONS	JAR TEST DATA				COMPLETE APPLICABLE BLANKS EACH MONTH.	FILTER OPERATION DATA						DINSINFECTON AND CT VALUES										MICROBIOLOGICAL EXAMINATION AND SYSTEM PRESSURE										
		COAGULANT MG/L	PH ADJUSTMENT MG/L	PH	NUMBER OF FILTERS USED		FILTER HOURS = COL 54 x HOURS RUN	AVERAGE LENGTH FILTER R/JN - HOURS	RATE-OF-FLOW GAUGES WORKING	LOSS-OF-HEAD GAUGES WORKING	TURNIDIMETERS WORKING	BACKWASH RATE gpm/ft2	BACKWASH WATER USED - 1,000 gallons	FIRST DISINFECTON SEQUENCE					SECOND DISINFECTON SEQUENCE					CT CALC. INACTIVATION RATIO	RAW	PLANT EFFLUENT DISTRIBUTION SYSTEM	FREE CHLORINE MG/L AT POINT OF SAMPLING & DISTRIBUTION SYSTEM	BT Results	Location of sampling point in distribution system. <b>Must vary within system.</b>				
														FREE CHLORINE END OF SEQUENCE	CONTACT TIME IN MINUTES	END OF PH SEQUENCE	CT CALCULATED	CT REQUIRED	FREE CHLORINE END OF SEQUENCE	CONTACT TIME IN MINUTES	END OF PH SEQUENCE	CT CALCULATED	CT REQUIRED										
47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75		76	77	78	
1	510						2	12.76	6.38	ok	ok	ok	18	57								2.5	74.4	7.6	186.0	11	16.91	2420	0				
2	610					(a) Type of Filters - Gravity ( x ) gravity	2	15.5	7.75	ok	ok	ok	18									2.7	74.4	7.5	200.9	9	22.32	1553	0				
3	432					Pressure ( )	2	10.8	5.4	ok	ok	ok	18									2.1	74.4	7.5	156.2	9	17.36	727	0	2.70	N	121 Lakewood Landing	
4	565					(b) Number of Filters -	2	14.4	7.2	ok	ok	ok	18									2.7	74.4	7.5	200.9	9	22.32	687	0	2.00	N	Waterford Across City Hall	
5	490					(c) Filter Area - Sq. Ft. (Each)	2	12.16	6.08	ok	ok	ok	18									2.6	74.4	7.5	193.4	9	21.49	365	0	2.00	N	2623 Lawmville Rd	
6	460					174sqft	2	11.74	5.87	ok	ok	ok	18									2.5	74.4	7.5	186.0	9	20.67	727	0	2.80	N	Bonneyview Tank	
7	378					(d) Filter Area - Sq. Ft. (Each)	2	9.36	4.68	ok	ok	ok	18									2.8	74.4	7.6	208.3	11	18.94	866	0	2.30	N	Kingston Hgts. Pump Station	
8	367					174sqft	2	9.34	4.67	ok	ok	ok	18									2.8	74.4	7.6	208.3	14	14.88	1120	0				
9	608					(e) Total Area - Sq. Ft. -	2	15.2	7.6	ok	ok	ok	18									2.8	74.4	7.5	208.3	14	14.88	613	0	2.00	N	166 Vancon Dr	
10	602					348sqft	2	15.46	7.73	ok	ok	ok	18	50								2.8	74.4	7.5	208.3	14	14.88	2420	0	1.80	N	181 High St	
11	344					(f) Filter Rate gpm/ft2	2	8.64	4.32	ok	ok	ok	18									2.6	74.4	7.5	193.4	13	14.88	2420	0	2.20	N	391 Oak Leaf st	
12	419					4gpm/ft2	2	10.94	5.37	ok	ok	ok	18									2.7	74.4	7.7	200.9	11	18.26	613	0	2.30	N	161 Hartford Village Way	
13	683					(g) Filter Rate gpm/ft2	2	10.96	5.48	ok	ok	ok	18									2.6	74.4	7.6	193.4	13	14.88	727	0	2.50	N	1512 Roane State Hwy	
14	682					4gpm/ft2	2	17.3	8.65	ok	ok	ok	18									2.5	74.4	7.6	183.8	13	14.14	517	0				
15	478					(h) Total Rated Filter Capacity	2	11.96	5.98	ok	ok	ok	18									2.3	74.4	7.6	173.4	13	13.33	345	0				
16	594					700gpm	2	15.24	7.62	ok	ok	ok	18									3.0	74.4	7.5	223.2	14	15.94	727	0				
17	511					GPM -	2	12.8	6.4	ok	ok	ok	18	59								2.7	74.4	7.6	200.9	16	12.56	613	0				
18	528					(i) Ion Exchange Unit Regenerate	2	13.46	6.73	ok	ok	ok	18										2.7	74.4	7.6	200.9	16	12.56	411	0			
19	534					With: Salt ( )	2	13.36	6.68	ok	ok	ok	18									2.6	74.4	7.6	193.4	13	14.88	326	0				
20	466					KMnO4 ( )	2	11.9	5.95	ok	ok	ok	18									2.9	74.4	7.5	215.8	14	15.41	308	0				
21	543					Acid ( )	2	13.6	6.8	ok	ok	ok	18									3.3	74.4	7.6	245.5	17	14.44	1046	0				
22	420						2	10.7	5.35	ok	ok	ok	18									3.0	74.4	7.7	223.2	17	13.13	435	0				
23	602						2	15.06	7.53	ok	ok	ok	18									3.1	74.4	7.6	230.6	17	13.57	687	0				
24	688						2	17.6	8.8	ok	ok	ok	18	66								2.8	74.4	7.7	208.3	17	12.25	365	0				
25	479						2	12	6	ok	ok	ok	18									2.6	74.4	7.7	193.4	16	12.09	387	0				
26	529						2	13.54	6.77	ok	ok	ok	18									2.7	74.4	7.7	200.9	16	12.56	345	0				
27	510						2	12.74	6.37	ok	ok	ok	18									2.5	74.4	7.7	186.0	16	11.63	435	0				
28	515						2	13.14	6.57	ok	ok	ok	18									2.7	74.4	7.7	200.9	16	12.56	248	0				
29	491						2	12.26	6.13	ok	ok	ok	18									2.5	74.4	7.8	186.0	16	11.63	488	0				
30	684						2	17.5	8.75	ok	ok	ok	18	55								2.7	74.4	7.6	200.9	16	12.56	365	0				
31	359						2	8.96	4.48	ok	ok	ok	18									2.3	74.4	7.7	171.1	16	10.70	387	0				
TOTAL	16081							406.38	203.09					287																		22.6	
AVE.	519							13.11	6.55					57																		2.3	
MAX.	688							12.76	6.38					57																		2.8	
MIN.	344							8.64	7.75					0																		1.8	

Remarks: \_\_\_\_\_  
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TENNESSEE DEPARTMENT OF ENVIRONMENT  
DIVISION OF WATER SUPPLY

COMPREHENSIVE MONTHLY OPERATION REPORT

NAME OF WATER UTILITY  
NAME OF WATER TREATMENT PLANT

**KINGSTON WATER DEPARTMENT**  
**KINGSTON SPRING SUPPLY**

COUNTY **Roane** PWSID **360**

MONTH OF **October** Year **2023**

DATE	WATER TREATED GALLONS FINISHED TURBIDITY NTU	CHLORINE			FLUORIDE			ALKALINITY MG/L		pH		HARDNESS MG/L		PO4		IRON			MANGANESE			CORROSION CONTROL
		POUNDS OR GALLONS USED	FREE RESIDUAL MG/L	SPRING PUMPHOUSE	POUNDS OR GALLON USED	CALCULATED	DOSAGE MG/L	DISTRIBUTION SYSTEM MG/L	TOTAL RAW	TOTAL FINISHED	RAW	FINISHED	RAW	FINISHED	SPRING	DISTRIBUTION	RAW	FINISHED	DIST. SYSTEM	GRAVITY FED LINE	SPRING	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	402	0.26	60.0	3.3	10	0.54	0.53		143		7.1		138.00	0.2	0.3		0.00	0.01		0.022	0.01	
2	429	0.31	60.0	2.9	11	0.56	0.50		139		7.2		138.00	0.4	0.4							
3	461	0.33	60.0	3.0	11	0.52	0.48		135		7.1		130.00	0.1	0.5							
4	425	0.37	60.0	2.8	11	0.57	0.50		135		7.2		130.00	0.0	0.2							
5	434	0.37	60.0	3.0	10	0.50	0.51		134		7.2		134.00	0.1	0.1							
6	441	0.31	60.0	2.6	10	0.50	0.52		130		7.1		120.00	0.1	0.1							
7	446	0.25	60.0	2.8	10	0.49	0.53		139		7.3		126.00	0.2	0.2		0.00	0.01		0.019	0.02	
8	472	0.24	60.0	2.7	10	0.46	0.55		139		7.3		140.00	0.2	0.2		0.01	0.01		0.018	0.02	
9	402	0.27	60.0	2.8	11	0.60	0.48		140		7.2		140.00	0.1	0.2							
10	456	0.26	60.0	2.7	10	0.48	0.54		139		7.2		142.00	0.2	0.2							
11	421	0.37	60.0	2.9	10	0.52	0.62		130		7.1		130.00	0.1	0.1							
12	449	0.25	60.0	2.7	10	0.49	0.57		129		7.2		134.00	0.1	0.2							
13	429	0.22	60.0	3.1	13	0.66	0.51		137		7.2		140.00	0.2	0.2							
14	494	0.23	60.0	2.5	8	0.35	0.56		136		7.2		138.00	0.1	0.2		0.01	0.00		0.019	0.02	
15	376	0.22	60.0	2.7	10	0.58	0.51		135		7.2		138.00	0.1	0.1							
16	435	0.29	60.0	3.2	10	0.50	0.53		135		7.1		138.00	0.2	0.2							
17	437	0.24	60.0	3.6	11	0.55	0.57		140		7.2		142.00	0.3	0.4							
18	448	0.20	60.0	3.0	12	0.59	0.58		135		7.1		140.00	0.1	0.1							
19	431	0.20	60.0	2.8	11	0.56	0.53		141		7.2		150.00	0.1	0.2							
20	420	0.13	60.0	3.0	10	0.52	0.58		140		7.2		140.00	0.1	0.2							
21	437	0.20	60.0	3.4	11	0.57	0.57		140		7.2		142.00	0.2	0.2		0.01	0.00		0.017	0.01	
22	422	0.24	60.0	3.1	10	0.52	0.55		138		7.3		138.00	0.2	0.2		0.02	0.05		0.012	0.01	
23	437	0.23	60.0	3.6	11	0.55	0.57		137		7.2		138.00	0.1	0.1							
24	309	0.25	60.0	3.2	12	0.62	0.51		137		7.3		142.00	0.1	0.1							
25	424	0.27	60.0	3.4	11	0.57	0.65		130		7.2		130.00	0.1	0.2							
26	430	0.32	60.0	3.2	11	0.56	0.59		135		7.2		140.00	0.1	0.1							
27	431	0.34	60.0	3.4	10	0.51	0.55		140		7.2		140.00	0.1	0.2							
28	413	0.29	60.0	3.3	8	0.42	0.59		141		7.2		140.00	0.2	0.2		0.02	0.00		0.010	0.01	
29	419	0.27	60.0	3.3	0	0.00	0.53		137		7.4		140.00	0.1	0.2		0.03	0.00		0.018	0.01	
30	425	0.54	60.0	3.2	16	0.82	0.45		139		7.2		140.00	0.1	0.2							
31	421	0.37	60.0	3.1	9	0.47	0.49		130		7.2		130.00	0.2	0.1							
TOTAL	13276	8.64	1860.00	94.30	318.00	16.14	16.75	0.00	4235.00	0.00	223.24	0.00	4248.00	4.47	5.83	0.00	0.10	0.08	0.00	0.135	0.10	0.00
AVE	428	0.28	60.00	3.04	10.26	0.52	0.54	0.00	136.61	0.00	7.20	0.00	137.03	0.14	0.19	0.00	0.01	0.01	0.00	0.017	0.01	0.00
MAX	494	0.54	60.00	3.60	16.00	0.82	0.65	0.00	143.00	0.00	7.37	0.00	150.00	0.37	0.50	0.00	0.03	0.05	0.00	0.022	0.02	0.00
MIN	309	0.13	60.00	2.50	0.00	0.00	0.45	0.00	129.00	0.00	7.08	0.00	120.00	0.04	0.05	0.00	0.00	0.00	0.00	0.010	0.01	0.00

REMARKS \_\_\_\_\_

Certified Operator \_\_\_\_\_

*[Signature]*  
Signature



BACTERIOLOGICAL EXAMINATION			
DATE	DATE SAMPLE COLLECTED	FREE CHLORINE MGL/LAT POINT OF SAMPLING	LOCATION OF SAMPLING POINT FROM DISTRIBUTION SYSTEM
24	25	26	27
1	Oct.1	2.5	1007 E. Race St.
2	Oct.2	1.7	Hwy 70 & Gallaher Rd.
3	Oct.3	2	601 N Kentucky St
4	Oct.4	2	2623 Lawnville Rd
5	Oct.5	2.9	1503 James Ferry Rd.
6	Oct.6	2	430 Ladd Landing
7	Oct.7	2.1	614 N. Kentucky St.
8	Oct.8	2	1452 Lawnville Rd.
9	Oct.9	1.8	Lakeside Dr.
10	Oct.10	2	# 2 Pump Station
11	Oct.11	2.3	505 Gallaher Rd
12	Oct.12	2.3	333 W. Race St
13	Oct.13	2.2	835 N. Kentucky St.
14	Oct.14	2.1	430 Ladd Landing
15	Oct.15	2	1007 E Race St
16	Oct.16	1.8	Pouplar Spring
17	Oct.17	1.8	900 Waterford Pl
18	Oct.18	2	935 N Kentucky St
19	Oct.19	2.1	Hwy 70 & Gallaher Rd.
20	Oct.20	2.4	# 2 Pump Station
21	Oct.21	2.4	835 N. Kentucky St.
22	Oct.22	2.3	101 First St.
23	Oct.23	1.6	505 Gallaher Rd
24	Oct.24.	2.3	Lakeside Dr.
25	Oct.25	2.2	Kiingston Hights Tank
26	Oct.26	2.1	Ridgecrest Tank
27	Oct.27	2.5	1503 James Ferry Rd.
28	Oct.28	2.3	614 N. Kentucky St.
29	Oct.29	2.1	430 Ladd Landing
30	Oct.30	2.4	505 Gallaher Rd
31	Oct.31	2.9	Morrison Hill Tank
TOTAL		67.1	
AVE.		2.16	
MAX.		2.9	
MIN.		1.6	



NOV 13 2023

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
**DIVISION OF WATER RESOURCES – WATER SUPPLY SECTION**  
 6<sup>th</sup> Floor, L & C Tower, 401 Church Street  
 Nashville, Tennessee 37243

**MONTHLY DISTRIBUTION SYSTEM FLUORIDE SAMPLING SUMMARY**  
**and QUARTERLY CHECK SAMPLE REPORTING**

<b>PUBLIC WATER SYSTEM NAME &amp; ADDRESS</b>	
KINGSTON WATER DEPARTMENT	
900 WATERFORD PLACE	
KINGSTON, TN 37763	
<b>Contact Person:</b>	John M. Poole
<b>PWS ID Number:</b> TN0000360	<b>County:</b> ROANE

	Month <sup>(1)</sup>	Average for Month mg/L <sup>(2)</sup>	Highest Fluoride Measurement mg/L <sup>(3)</sup>	Lowest Fluoride Measurement mg/L <sup>(4)</sup>	Number of Days Fluoride Measured <sup>(5)</sup>
1.	January	0.56	0.68	0.45	31
2.	February	0.50	0.60	0.40	28
3.	March	0.56	0.65	0.40	31
4.	April	0.49	0.57	0.37	30
5.	May	0.56	0.64	0.49	31
6.	June	0.54	0.61	0.46	30
7.	July	0.53	0.64	0.44	31
8.	August	0.52	0.62	0.45	31
9.	September	0.54	0.60	0.45	30
10.	October	0.54	0.69	0.45	31
11.					
12.					

**Instructions:**

This form is to be completed by all community water systems that add fluoride to their finished water. It may be submitted monthly or quarterly to the Division of Water Supply at the address listed below.

- (1) Enter the month for which the results are being reported.
- (2) Enter the arithmetic average of all distribution system fluoride measurements taken during the month.
- (3) Enter the highest fluoride value measured during the month in the distribution system.
- (4) Enter the lowest fluoride value measured during the month in the distribution system.
- (5) Enter the number of days fluoride samples were taken in the distribution system.
- (6) **Mail form to the above address.** For assistance or questions call 1-888-891-8332

**Quarterly Check Samples:**

Collection Date	Address	PWS Result (ppm)	Certified Lab	Certified Lab Result (ppm)
01/04/23	125 First Street	0.56	Pace Analytical / ESC Labs	0.422
04/06/23	Hwy. 70/Gallaher Road	0.50	Pace Analytical / ESC Labs	0.478
07/06/23	900 Waterford Place	0.47	Pace Analytical / ESC Labs	0.433

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

n.  
 Certified Operator: John M. Poole Signature:  Date: 11/08/23  
 Phone: 865-376-7187



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER SUPPLY

NOV 13 2023

DISINFECTANT MONITORING AND MRDL COMPLIANCE REPORT

ENTRY POINT: B
PUBLIC WATER SYSTEM NAME AND ADDRESS: KINGSTON WATER DPT. SPRING SUPPLY
900 WATERFORD PLACE
KINGSTON, TN 37763
PWSID #: 0000360
SAMPLE PERIOD: START DATE 100123, END DATE 103123

I. SYSTEMS USING CHLORINE OR CHLORAMINES (1)

A. Distribution System Monitoring

Number of Samples Required (1): 010
Number of Samples Taken: 010
Lowest Residual Measured (mg/L): 1.80
Average Residual Measured (mg/L): 2.30
Number of Samples below 0.2 mg/L: 000
% of Samples 0.2 mg/L or higher: 100.0

B. Entry Point Monitoring (For Sub Part H Systems (2) Only)

Number of Days Residual Measurements Required (3): 31
Type of Monitoring Conducted: Grab [X], Continuous [X]
Lowest Residual Measured Entering the D.S.: 2.50 mg/L
Was the Continuous Chlorine Analyzer out of service more than 5 consecutive days while this facility was in operation? [N] ("Y" for yes, or "N" for no)

II. SYSTEMS USING CHLORINE DIOXIDE

A. Entry Point Monitoring

Number of Days Residual Measurements Required: [ ]
Highest Residual Measured Entering the D.S.: [ ] mg/L
Number of Days Residual Measured > MRDL: [ ]
Number of Consecutive Days Residual Measured > MRDL: [ ]

B. Distribution System Monitoring

1. Systems Not Utilizing Disinfection Booster Stations

Date E.P. Sample Exceeded MRDL: [ ]
Date of Follow-Up Sampling (4): [ ]
Time of First Sample: [ ]
Time of Second Sample: [ ]
Time of Third Sample: [ ]
Result (mg/L): [ ]

2. Systems Utilizing Disinfection Booster Stations

Date E.P. Sample Exceeded MRDL: [ ]
Date Follow-Up Sampling (5): [ ]
Closest Customer: [ ]
Sample Results (mg/L) at: Average Point [ ], Maximum Residence Time [ ]

- Notes:
(1) Disinfection residuals must be measured at the same frequency and locations for all total coliform samples that are taken.
(2) Subpart H Systems are public water systems that treat surface water and/or ground water under the direct influence of surface water.
(3) Disinfection residuals must be measured continuously for chlorine for systems serving more than 3,330 persons at the entry point to the distribution system each day of operation.
(4) For systems using chlorine dioxide, and not utilizing booster chlorination facilities in the distribution system, if an entry point sample exceeds the MRDL, a three-sample set of measurements must be taken the day after the exceedance at a point closest to the first customer at six-hour intervals.
(5) For systems using chlorine dioxide, and which utilize booster chlorination facilities in the distribution system, if an entry point sample exceeds the MRDL, a three-sample set of measurements must be taken the day after the exceedance at the following locations: 1) a point closest to the first customer, 2) a point reflecting the average residence time, and, 3) a point reflecting the maximum residence time.

I CERTIFY THAT THE INFORMATION LISTED ON THIS FORM ACCURATELY CORRESPONDS TO THE OPERATION OF THIS FACILITY FOR THE REPORTING PERIOD SPECIFIED HEREIN.

PREPARED BY John M. Poole DATE 11/08/23 APPROVED BY John M. Poole DATE 11/08/23



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF WATER RESOURCES, WATER SUPPLY SECTION

NOV 13 2023

INTERIM ENHANCED SURFACE WATER TREATMENT RULE  
FILTER PERFORMANCE REPORT <sup>(1)</sup>

PUBLIC WATER SYSTEM NAME AND ADDRESS  
KINGSTON WATER DEPARTMENT

900 WATERFORD PLACE  
KINGSTON, TN 37763

PWSID #						ENTRY POINT	SAMPLE PERIOD					TOTAL HOURS PLANT OPERATED THIS MONTH			LABORATORY ID												
0	0	0	0	3	6	0	A	0	8	0	1	2	3	0	8	3	1	2	3	2	1	0	0	0	3	4	2
REPORTABLE SAMPLES <sup>(2)</sup>						NUMBER OF REPORTABLE SAMPLES LESS THAN OR EQUAL TO THE LOWER NTU STANDARD <sup>(3)</sup>		PERCENT OF REPORTABLE SAMPLES LESS THAN OR EQUAL TO THE LOWER NTU STANDARD			NUMBER OF REPORTABLE SAMPLES EXCEEDING THE UPPER NTU STANDARD <sup>(4)</sup> (LIST DATES ON BACK)			HIGHEST FINISHED WATER TURBIDITY THIS MONTH													
REQUIRED			TAKEN																								
0	5	3	0	8	6	0	8	6	1	0	0	0	1	0	0	0	0	0	0	9	2						

**Notes:**  
 (1) This form applies to filtration systems utilizing either a surface water supply or a source that has been designated groundwater under the direct influence of surface water.  
 (2) Systems utilizing cartridge filtration must at a minimum, measure turbidity once per day while treating water. Systems required to measure and record finished water turbidity every 4 hours that the plant is in operation, shall report the highest value measured during each 4-hour period. Systems utilizing continuous monitoring turbidimeters shall report the highest recorded value for every 4 hour period.  
 (3) NTU standards vary depending on the type of filtration treatment provided, and include a lower limit that must be met in 95% of the reportable samples, and an upper limit that cannot be exceeded without receiving a treatment technique violation. Use the lower NTU standard applicable to this facility for this calculation.  
 (4) Indicate the number of reportable samples that exceeded the upper NTU standard. On the back of this form, indicate the dates when a sample exceeded the upper NTU standard, and the date the state was notified of the exceedance.

Did this facility meet the CT requirements for each day it was in operation?	Y or N	<b>B. FOR ANY FILTER AT THIS FACILITY <sup>(6)</sup></b>												
	Y	Were any 2 consecutive filter effluent measurements taken 15 minutes apart:												
<b>A. FOR ALL FILTERS AT THIS FACILITY</b>	Y or N	Y or N		Filter Numbers (maximum of four filters)										
1. Was turbidity monitored continuously and the results recorded for each filter effluent line?	Y	Y or N		1	2									
2. If the answer to question number 1 is no, was grab sampling conducted for every 4 hours the continuous monitor was out of service?	N	Y or N		1	2									
3. If the answer to question number 2 is yes, was grab sampling conducted for more than 5 consecutive days on any individual filter?	N	Y or N		1	2									
		Y or N		1	2									

**Note:**  
 (5) If this facility answered "Yes" to any question listed in Section B. above, then the system must submit a "Monthly Turbidity Exceedance Report" (CN-1198) for the individual filter that met at least one of the conditions listed.

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

PREPARED BY: John M. Poole DATE: 11/08/23 PHONE: ( 865) 376-7187 APPROVED BY: John M. Poole DATE: 11/08/23 PHONE: ( 865) 376-7187



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF WATER SUPPLY

DISINFECTANT MONITORING AND MRDL COMPLIANCE REPORT NOV 13 2023

PWSID #		ENTRY POINT	PUBLIC WATER SYSTEM NAME AND ADDRESS	
0 0 0 0 3 6 0		A	KINGSTON WATER DEPARTMENT	
SAMPLE PERIOD		900 WATERFORD PLACE		
START DATE	END DATE	KINGSTON, TN 37763		
1 0 0 1 2 3	1 0 3 1 2 3			
m m d d y y	m m d d y y			

I. SYSTEMS USING CHLORINE OR CHLORAMINES <sup>(1)</sup>

A. Distribution System Monitoring

Number of Samples Required <sup>(1)</sup>	Number of Samples Taken	Lowest Residual Measured (mg/L)	Average Residual Measured (mg/L)	Number of Samples below 0.2 mg/L	% of Samples 0.2 mg/L or higher
0 1 0	0 1 0	1 . 8 0	2 . 3 0	0 0 0	1 0 0 . 0

B. Entry Point Monitoring (For Sub Part H Systems <sup>(2)</sup> Only)

Number of Days Residual Measurements Required <sup>(3)</sup>	Type of Monitoring Conducted	Lowest Residual Measured Entering the D.S.	Was the Continuous Chlorine Analyzer out of service more than 5 consecutive days while this facility was in operation?
3 1	Grab <input checked="" type="checkbox"/> Continuous <input checked="" type="checkbox"/>	2 . 1 0 mg/L	N ("Y" for yes, or "N" for no)
3 1			

II. SYSTEMS USING CHLORINE DIOXIDE

A. Entry Point Monitoring

Number of Days Residual Measurements Required	Highest Residual Measured Entering the D.S.	Number of Days Residual Measured > MRDL	Number of Consecutive Days Residual Measured > MRDL

B. Distribution System Monitoring

1. Systems Not Utilizing Disinfection Booster Stations

Date E.P. Sample Exceeded MRDL	Date of Follow-Up Sampling <sup>(4)</sup>	Time of First Sample	Time of Second Sample	Time of Third Sample
		Result (mg/L)	Result (mg/L)	Result (mg/L)

2. Systems Utilizing Disinfection Booster Stations

Date E.P. Sample Exceeded MRDL	Date Follow-Up Sampling <sup>(5)</sup>	Closest Customer	Average Point	Maximum Residence Time

- Notes:
- Disinfection residuals must be measured at the same frequency and locations for all total coliform samples that are taken. The number of required samples is the total number of routine and repeat total coliform samples taken during the reporting period.
  - Subpart H Systems are public water systems that treat surface water and/or ground water under the direct influence of surface water.
  - Disinfection residuals must be measured continuously for chlorine for systems serving more than 3,330 persons at the entry point to the distribution system each day of operation. Grab sampling may be conducted at the rate specified in the regulations for systems serving less than 3,300.
  - For systems using chlorine dioxide, and not utilizing booster chlorination facilities in the distribution system, if an entry point sample exceeds the MRDL, a three-sample set of measurements must be taken the day after the exceedance at a point closest to the first customer at six-hour intervals. Analysis must be by Ion Chromatography.
  - For systems using chlorine dioxide, and which utilize booster chlorination facilities in the distribution system, if an entry point sample exceeds the MRDL, a three-sample set of measurements must be taken the day after the exceedance at the following locations: 1) a point closest to the first customer, 2) a point reflecting the average residence time, and, 3) a point reflecting the maximum residence time. Analysis must be by Ion Chromatography.

I CERTIFY THAT THE INFORMATION LISTED ON THIS FORM ACCURATELY CORRESPONDS TO THE OPERATION OF THIS FACILITY FOR THE REPORTING PERIOD SPECIFIED HEREIN.

PREPARED BY John M. Poole DATE 11/08/23 APPROVED BY John M. Poole DATE 11/08/23





**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF WATER SUPPLY  
L & C Tower, 6<sup>th</sup> Floor  
401 Church Street  
Nashville, Tennessee 37243**

**MONTHLY MICROBIOLOGICAL and DISINFECTANT MONITORING REPORT**

Public Water System Name	<u>KINGSTON WATER DEPARTMENT</u>	Phone:	<u>(865) 376-7187</u>
Address	<u>900 WATERFORD PLACE, KINGSTON, TN 37763</u>	County:	<u>ROANE</u>

**Bacteriological Monitoring <sup>(1)</sup>**

PWSID	Contaminant ID	Analysis Method	Sample Period Begin	Sample Period End	
0 0 0 0 3 6 0	3 1 0 0	9 2 2 3	1 0 0 1 2 3	1 0 3 1 2 3	
Total Number Of Routine Distribution Samples Analyzed	Total Number Of Positive Samples Analyzed <sup>(2)</sup>	Total Number Of Repeat Samples Analyzed <sup>(2)</sup>	Laboratory ID	Laboratory Name	
0 1 0	0 0 0	0 0 0	0 3 1 2 1	<u>KINGSTON WTP</u> <u>1318 S.KENTUCKY ST</u> <u>KINGSTON, TN 37763</u>	
	Date of First Sample		Date of Last Sample		
	1 0 0 4 2 3		1 0 1 1 2 3		

**Disinfectant Residual Monitoring <sup>(3)</sup>**

Lowest Residual Measured (mg/L)	Average Residual Measured (mg/L)	Number of Samples below 0.2 mg/L	% of Samples 0.2 mg/L or higher
1 . 8 0	2 . 3 0	0 0 0	1 0 0 . 0

**Notes**

- (1) This form is to be submitted for systems reporting 10 or more bacteriological compliance samples during the reporting period.
- (2) All positive and repeat samples must be reported on Form CN-0800, Bacteriological Analysis Detail.
- (3) Systems supplying chlorinated water must monitor disinfectant residuals at the same locations and frequencies as total coliform sampling is required.

**Administrative Information**

I certify the information listed on this form accurately corresponds to the operation of this facility for the reporting period specified herein.

Responsible Official: John M. Poole Phone: (865) 376-7187  
 Program Contact: John M. Poole Phone: (865) 376-7187  
 Technical Contact: John M. Poole Phone: (865) 376-7187

Return to: Tennessee Division of Water Supply, 6<sup>th</sup> Floor, L & C Tower, 401 Church Street, Nashville TN, 37243