



Town of Holbrook
Office of Joint Superintendent
(781) 767-1800

RANDOLPH-HOLBROOK JOINT WATER BOARD

50 North Franklin Street
Holbrook, MA 02343



Town of Randolph

April 8, 2022

Commonwealth of Massachusetts
Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02374

Monthly Reports Filtered System Forms
Forms F, G, I, J, TT
Analysis for TOC, DOC, SUVA
Chemical Addition Reports
DBPR Compliance Report
March, 2022 Randolph/Holbrook
Joint Water System, PWS #424001

Gentlemen:

Enclosed please find all reports as referenced above for the month of March, 2022. Should there be any questions, please do not hesitate to call me.

Sincerely,

William Cookerly
Chief Plant Operator

Enclosures

Cc: Board of Health Holbrook
Board of Health Randolph
Brian Howard, Town Manager, Randolph
Ryan Allgrove, EPG



Compliance Determination for Filtered Systems - Monthly Report

I. PWS INFORMATION:

PWSID#: 4244001 PWS Name: RANDOLPH-HOLBROOK JOINT WATER PWS Town: RANDOLPH
 Treatment Plant Name: RANDOLPH WATER PLANT Reporting Period → Month: MARCH Year: 2022

II. TURBIDITY PERFORMANCE CRITERIA:

1. Monthly Turbidity (95%) NTU Limit - The turbidity level of a system's filtered water must be less than or equal to the Monthly Turbidity NTU Limit in at least 95% of the measurements taken each month for the filtration technology used, otherwise SWTR TT Violation (Tier 2).

<u>186</u>	= A	Total # of filtered water turbidity measurements for month (SWTR - Form F)
<u>186</u>	= B	Total # of filtered water turbidity measurements less than or equal to the specified limits for the filtration technology used. (SWTR - Form F)
<u>100</u>	= (B / A) × 100	The percentage of turbidity measurements meeting the Monthly Turbidity 95% NTU Limit.

2. Max Day NTU Limit - The turbidity level of a system's filtered water must at no time exceed the Max Day NTU Limit for the filtration technology used, otherwise SWTR TT Violation (Tier 2).

Record the date and turbidity value for any measurements exceeding the Max Day NTU. Check box if "None"

Date	Value	Date Reported to DEP	Date	Value	Date Reported to DEP

For each day the Max Day NTU limit is exceeded, the DEP must be notified by the end of the next business day. SWTR TT Violation (Tier 2). If DEP is not consulted within 24 hours then it is a SWTR TT (Tier 1) violation requiring public notification within 24 hours.

III. DISINFECTION PERFORMANCE CRITERIA:

1. Point-of-Entry Minimum Disinfectant Residual Criteria - Residual Disinfectant concentration cannot be < 0.2 mg/L for more than 4 hours. SWTR TT Violation (Tier 2).

Minimum Disinfectant Residual at Point-of-Entry to Distribution System:

Day	Cl ₂ mg/l	Day	Cl ₂ mg/l										
1	1.68	6	1.45	11	1.84	16	1.65	21	1.25	26	1.56	31	1.84
2	1.68	7	1.40	12	1.77	17	1.87	22	1.65	27	1.26	Residual Measured	
3	1.62	8	1.64	13	1.40	18	1.82	23	1.90	28	1.63	<input checked="" type="checkbox"/> Free Cl ₂	
4	1.46	9	1.52	14	1.52	19	1.36	24	2.00	29	1.61	<input type="checkbox"/> Total Cl ₂	
5	1.54	10	1.89	15	1.77	20	1.70	25	1.76	30	1.65	<input type="checkbox"/> Combined Cl ₂	

If at any time the residual falls below 0.2 mg/l in the water entering the distribution system, the supplier of water must notify the Department as soon as possible, but no later than by the end of the next business day. The supplier of water also must notify the Department by the end of the next business day whether or not the residual was restored to at least 0.2 mg/l within four hours.

Date(s) Residual < 0.2 mg/l	Duration of Low Level (hrs.)	Date Reported to DEP	Date(s) Residual < 0.2 mg/l	Duration of Low Level (hrs.)	Date Reported to DEP

2. Distribution System Disinfectant Residual Criteria - Residual Disinfectant concentration (V) cannot be undetectable in greater than 5% of samples in a month, for any two consecutive months. SWTR TT Violation (Tier 2). Chlorine residuals must be measured at the same time and location as total coliform distribution routine & repeat samples. If no residual is detected, an HPC sample must be collected and analyzed.

Total # of HPC samples taken during month: 62 # HPC sites > 500/mL: 0 # HPC sites ≤ 500/mL: 62

<u>66</u>	= a	# of sites where Cl ₂ residual measurements were made, whether a residual was detected or not (should be the same # of sites reported on your monthly DBPR Cl ₂ residual report)
<u>0</u>	= b	# of sites HPC samples were analyzed <i>instead</i> of Cl ₂ residual measurements
<u>0</u>	= c	# of sites where no Cl ₂ residual was detected and no HPC sample was analyzed
<u>0</u>	= d	# of sites where no Cl ₂ residual was detected and HPC > 500 CFU/mL
<u>0</u>	= e	# of sites where no Cl ₂ residual measurement was made and HPC > 500 CFU/mL

Water in the distribution system with a heterotrophic bacteria concentration (HPC) less than or equal to 500/mL, is deemed to have a detectable disinfectant residual for purposes of determining compliance with this requirement. When analyzed, report HPC results on your monthly DEP Bacteriological Report.

$V = \frac{(c+d+e)}{(a+b)} \times 100$ This Month % V = 0 Previous Month % V = 0 is V > 5% for 2 months? Yes or No

I certify under penalties of law that I am the person authorized to provide this information and the information contained herein is true.

PWS Authorized Signature:

William Cooksey, Chief Operator
4-12-2022



Massachusetts Department of Environmental Protection - Drinking Water Program **SWTR**
CT Determination for Filtered Systems **I**

I. PWS INFORMATION:

PWSID#: 4244001 PWS Name: Randolph-Hillbrook Joint Water PWS Town: Randolph
 Treatment Plant Name: Randolph Water Plant Reporting Period → Month: MARCH Year: 2020
 Disinfectant: Chlorine Gas/Faster Eff. Sequence of Application: 1st 2nd 3rd 4th 5 6th

II. DAILY REPORTING: All measurements taken during peak hourly flow.

Day	Peak Hourly Flow ² (gpm)	Disinfectant Concentration ³ C (mg/L)	Disinfectant Contact Time ⁴ T (min.)	CT calc (= C x T)	pH ⁵	Water Temp ⁶ (°C)	CT ⁷ 99.9	Inactivation Ratio ⁸ (CT calc / CT 99.9)	Inactivation Ratio ⁹ < 1.0
1	2,400	1.68	50	84	6.20	8.0	17	4.9	<input type="checkbox"/> Yes
2	2,400	1.68	50	84	6.15	8.3	17	4.9	<input type="checkbox"/> Yes
3	2,400	1.62	50	81	6.00	8.6	17	4.8	<input type="checkbox"/> Yes
4	2,400	1.46	50	73	6.10	8.4	17	4.3	<input type="checkbox"/> Yes
5	2,400	1.54	50	77	6.00	8.0	17	4.5	<input type="checkbox"/> Yes
6	2,400	1.45	50	72.5	6.15	7.9	17	4.3	<input type="checkbox"/> Yes
7	2,400	1.40	50	70	6.25	7.9	17	4.1	<input type="checkbox"/> Yes
8	2,400	1.64	50	82	6.20	8.6	17	4.8	<input type="checkbox"/> Yes
9	2,400	1.52	50	76	5.95	7.8	17	4.5	<input type="checkbox"/> Yes
10	2,400	1.89	50	94.5	6.00	8.3	17	5.6	<input type="checkbox"/> Yes
11	2,400	1.84	50	92	6.15	7.8	17	5.4	<input type="checkbox"/> Yes
12	2,400	1.77	50	88.5	6.05	8.0	17	5.2	<input type="checkbox"/> Yes
13	2,400	1.40	50	70	6.10	8.2	17	4.1	<input type="checkbox"/> Yes
14	2,400	1.52	50	76	6.15	8.7	17	4.5	<input type="checkbox"/> Yes
15	2,400	1.77	50	88.5	6.00	8.1	17	5.2	<input type="checkbox"/> Yes
16	2,400	1.65	50	82.5	6.15	7.6	17	4.9	<input type="checkbox"/> Yes
17	2,400	1.87	50	93.5	5.95	7.4	17	5.5	<input type="checkbox"/> Yes
18	2,400	1.82	50	91	6.05	7.0	17	5.4	<input type="checkbox"/> Yes
19	2,400	1.36	50	68	6.00	7.2	17	4.0	<input type="checkbox"/> Yes
20	2,400	1.70	50	85	6.10	7.3	17	5.0	<input type="checkbox"/> Yes
21	2,400	1.75	50	87.5	6.20	7.9	17	5.2	<input type="checkbox"/> Yes
22	2,400	1.65	50	82.5	6.00	8.1	17	4.9	<input type="checkbox"/> Yes
23	2,400	1.90	50	95	5.90	8.7	17	5.6	<input type="checkbox"/> Yes
24	2,400	2.00	50	100	6.05	9.3	17	5.9	<input type="checkbox"/> Yes
25	2,400	1.76	50	88	6.10	8.8	17	5.2	<input type="checkbox"/> Yes
26	2,400	1.56	50	78	6.10	8.6	17	4.6	<input type="checkbox"/> Yes
27	2,400	1.26	50	63	6.15	8.0	17	3.7	<input type="checkbox"/> Yes
28	2,400	1.63	50	81.5	6.20	7.8	17	4.8	<input type="checkbox"/> Yes
29	2,400	1.61	50	80.5	6.25	7.6	17	4.7	<input type="checkbox"/> Yes
30	2,400	1.65	50	82.5	6.15	7.4	17	4.9	<input type="checkbox"/> Yes
31	2,400	1.84	50	92	6.20	7.5	17	5.4	<input type="checkbox"/> Yes

1. Use a separate form for each disinfectant/sampling point. Enter disinfectant and sequence position, e.g. "ozone/1st" or "ClO₂/3rd". If more than one disinfectant sampling point, you must also complete SWTR Form H and calculate the cumulative inactivation ratio SUM (CTcalc/CT99.9) to determine compliance.
2. Peak hourly flow means the highest pumpage *hour* during the day, not the absolute peak flow at any instant.
3. The residual disinfectant concentration(s) ("C") of the water before or at the first customer must be measured each day during peak hourly flow.
4. The disinfectant contact time(s) ("T") must be determined for each day during peak hourly flow. The time T used in calculating CT, is the time it takes the water, during peak hourly flow, to move between the point of disinfection application and the point at which the residual is measured.
5. If the system uses free chlorine, the pH of the disinfected water must be measured at least once per day at each chlorine residual disinfectant concentration sampling point during peak hourly flow.
6. The temperature of the disinfected water must be measured at least once per day at each residual disinfectant concentration sampling point during peak hourly flow.
7. Use Inactivation Tables at 310 CMR 22.20A Tables 1.1 – 1.6, 2.1 and/or 3.1
8. The inactivation ratio (CTcalc/CT99.9) is determined before or at the first customer during peak hourly flow and if the (CTcalc/CT99.9) is < 1.0, the 99.9% *Giardia lamblia* inactivation requirement has not been achieved.
9. More than one "Yes" response above may indicate a SWTR Treatment Technique violation (Tier 2).

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

PWS Authorized Signature: William Cookley

Date: 4-4-2022

Title: Chief Operator



Massachusetts Department of Environmental Protection – Drinking Water Program
CHEMICAL ADDITION REPORT – 310 CMR 11.15(4) Chemical Addition Reporting Requirements

C-ADD

I. PWS Information - Refer to MassDEP "Chemical Addition Report Guidance and Instructions" for details.

PWS Name ¹ :	RANDOLPH-HOLBROOK JW	Town ¹ :	RANDOLPH-HOLBROOK	PWSID ¹ :	424001
Treatment Plant Name ² :	RANDOLPH WATER PLANT	Treatment Plant ID# ² :	4244001-01T	Reporting Period ³ :	MARCH, 2022
			Month	Year	

II. Chemical & Operational Information

Chemical Name ⁴ :	POLYALUMINUM CHLORIDE	Purchased Strength ⁵ :	1.0	Target Range/min ¹² :	14
Manufacturer ⁵ :	HOLLAND COMPANY	Purchased Density (lbs/gal) ⁹ :	10.3	Target Dose ¹³ :	18
Product Name ⁶ :	PCH-180	Dilution Factor or Mix Ratio ¹⁰ :	NA	Alarm Setting (low) ¹⁴ :	NA
Reason for Adding Chemical ⁷ :	COAGULATION	NSF Approved (Y/N) ¹¹ :	Y	Alarm Setting (high) ¹⁴ :	NA
			Date of last anti-siphon valve inspection/replacement ¹⁵ :	NA	

III. Daily Reporting Note: Water quality data reported on C-ADD form may be considered for compliance purposes.

Day	Treated Water ¹⁶		Measured Chemical Used		Calculated Chemical Used (lbs) ¹⁸	Chemical Dosage ¹⁹ (mg/L)	Parameters Measured ²⁰ , Results, Units and Method ²⁰ - (G) Grab or Continuous (A) Analyzer ²¹			O&M Notes/Comments ²²	
	<input type="checkbox"/> Gallons	<input type="checkbox"/> MG	Volume ¹⁷ (gal/day)	Weight ¹⁷ (lbs/day)			a. RAW PH DAILY AVE	b.	c.		
1			2.8	130	1,339	19	6.80	<input type="checkbox"/> G <input type="checkbox"/> A	<input type="checkbox"/> G <input type="checkbox"/> A	<input type="checkbox"/> G <input type="checkbox"/> A	PWS note any equipment breakdown, off-line status, changes in purchased product or batch mixing day, measured parameters or dosages that are out of target range, etc.
2			2.7	119	1,226	18	6.95				
3			2.8	110	1,133	16	6.85				
4			2.8	111	1,143	16	6.90				
5			2.8	126	1,298	18	6.90				
6			2.8	108	1,112	16	6.85				
7			2.8	106	1,092	15	6.85				
8			2.7	130	1,339	20	7.00				
9			2.8	125	1,288	18	6.90				
10			2.8	130	1,339	19	6.90				
11			2.8	125	1,288	18	6.90				
12			2.8	130	1,339	19	6.85				
13			2.5	120	1,236	20	6.95				
14			2.8	140	1,442	20	6.95				
15			3.0	125	1,288	17	6.90				
16			2.6	115	1,185	18	6.75				
17			2.8	115	1,185	17	6.80				
18			2.8	105	1,082	15	6.85				
19			2.8	117	1,205	17	6.90				
20			2.7	113	1,164	17	6.90				
21			2.8	120	1,236	18	6.80				
22			2.8	130	1,339	19	6.85				
23			2.8	136	1,401	20	6.85				
24			2.8	117	1,205	17	6.80				
25			2.9	110	1,133	16	6.95				
26			2.6	118	1,215	19	6.80				
27			2.9	112	1,154	16	6.80				
28			2.7	125	1,288	19	6.90				
29			2.8	120	1,236	18	6.85				
30			2.8	120	1,236	18	6.85				
31			2.8	106	1,092	15	6.90				
Total											

Indicate total # of days the residual was off-target for the month (from Section II) Monthly Target Summary²³:

²⁴Describe result (daily average, min/max, instantaneous reading, grab, etc), sample location (entry-point, before/after filters, tanks, etc.) and instrumentation used (SCADA, chart recorder, test kit, bench, etc.)²⁰:

a. *Raw Ph, Daily Average, Test Kit*

b. *William Coakley 4-4-2022*

c. *William Coakley, Chief Operator*

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.
PWS Authorized Person / Signature & Date²⁴:
Print Name: *William Coakley* Title: *Chief Operator*



Massachusetts Department of Environmental Protection – Drinking Water Program
CHEMICAL ADDITION REPORT – 310 CMR 11.15(4) Chemical Addition Reporting Requirements

C-ADD

I. PWS Information - Refer to MassDEP "Chemical Addition Report Guidance and Instructions" for details.

PWS Name ¹ :	RANDOLPH-HOLBROOK JOINT WATER	Town ¹ :	RANDOLPH-HOLBROOK	PWSID ¹ :	424001
Treatment Plant Name ² :	RANDOLPH WATER PLANT	Treatment Plant ID# ² :	4244001-01T	Reporting Period ³ :	MARCH 2022 Month Year

II. Chemical & Operational Information

Chemical Name ⁴ :	CHLORINE	Purchased Strength ⁵ :	1.0	Target Range/min ¹² :	0.20	
Manufacturer ⁶ :	AXIAL, LLC	Purchased Density (lbs/gal) ⁸ :	12.3	Target Dose ¹³ :	NA	
Product Name ⁶ :	CHLORINE	Dilution Factor or Mix Ratio ¹⁰ :	NA	Alarm Setting (low) ¹⁴ :	1.0	
Reason for Adding Chemical ⁷ :	DISINFECTANT	NSF Approved (Y/N) ¹¹ :	Y	Alarm Setting (high) ¹⁴ :	3.0	
		Date of last anti-siphon valve inspection/replacement ¹⁵ :				NA

III. Daily Reporting Note: Water quality data reported on C-ADD form may be considered for compliance purposes.

Day	Treated Water ¹⁶		Measured Chemical Used		Calculated Chemical Used (lbs) ¹⁸	Chemical Dosage (mg/L) ¹⁹	Parameters Measured ²⁰ , Results, Units and Method ²⁰ - (G)rab or Continuous (A)nalyzer ²¹			O&M Notes/Comments ²²
	<input type="checkbox"/> Gallons <input checked="" type="checkbox"/> MG	Volume ¹⁷ (gal/day)	Weight ¹⁷ (lbs/day)	a. FREE CL DAILY AVE			b. FREE CL DAILY MINIMUM	c.		
								<input type="checkbox"/> G <input type="checkbox"/> A	<input type="checkbox"/> G <input type="checkbox"/> A	
1	2.8		84	3.6	2.22	1.68				
2	2.7		73	3.2	1.89	1.68				
3	2.8		79	3.4	1.87	1.62				
4	2.8		74	3.2	1.82	1.46				
5	2.8		74	3.2	1.86	1.54				
6	2.8		70	3.0	1.73	1.45				
7	2.8		77	3.3	1.77	1.40				
8	2.7		73	3.2	1.92	1.64				
9	2.8		81	3.5	1.95	1.52				
10	2.8		82	3.5	2.12	1.89				
11	2.8		84	3.6	2.15	1.84				
12	2.8		80	3.4	2.08	1.77				
13	2.5		74	3.6	1.96	1.40				
14	2.8		85	3.6	2.07	1.52				
15	3.0		81	3.2	2.09	1.77				
16	2.6		77	3.6	2.17	1.65				
17	2.8		79	3.4	2.16	1.87				
18	2.8		78	3.3	2.15	1.82				
19	2.8		80	3.4	2.08	1.36				
20	2.7		88	3.9	2.10	1.70				
21	2.8		81	3.5	2.12	1.75				
22	2.8		86	3.6	2.19	1.65				
23	2.8		85	3.6	2.28	1.90				
24	2.8		68	2.9	2.21	2.00				
25	2.9		64	2.7	2.09	1.76				
26	2.6		64	3.0	2.01	1.56				
27	2.9		81	3.3	2.01	1.26				
28	2.7		99	4.4	1.89	1.63				
29	2.8		75	3.2	1.83	1.61				
30	2.8		74	3.2	1.85	1.65				
31	2.8		82	3.5	2.02	1.84				

Total Indicate total # of days the residual was off-target for the month (from Section II) Monthly Target Summary²³:

*Describe result (daily average, min/max, instantaneous reading, grab, etc), sample location (entry-point, before/after filters, tanks, etc.) and instrumentation used (SCADA, chart recorder, test kit, bench, etc.)²⁰:

a. Daily Average, Free Chlorine, Finished Water, Grab Sample, Test Kit

b. Daily Minimum, Free Chlorine, Finished Water, Grab Sample, Test Kit

c. *Test Kit*

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

PWS Authorized Person - Signature & Date²⁴:
William Coker 4-4-2022

Print Name: *William Coker* Title: *Chief Operator*



Massachusetts Department of Environmental Protection -- Drinking Water Program
CHEMICAL ADDITION REPORT - 310 CMR 11.15(4) Chemical Addition Reporting Requirements

C-ADD

I. PWS Information - Refer to MassDEP Chemical Addition Report Guidance and Instructions for details.

PWS Name ¹ :	RANDOLPH-HOLBROOK JW	Town ¹ :	RANDOLPH-HOLBROOK	PWSID ¹ :	424001
Treatment Plant Name ² :	RANDOLPH WATER PLANT	Treatment Plant ID# ² :	424001-01T	Reporting Period ² :	MARCH 2022

II. Chemical & Operational Information

Chemical Name ³ :	CALCIUM HYDROXIDE	Purchased Strength ³ :	0.85	Target Range/min ² :	NA
Manufacturer ³ :	CARMEUSE LIME & STONE	Purchased Density (lbs/gal) ³ :	18.7	Target Dose ³ :	NA
Product Name ³ :	HYDRATED LIME	Dilution Factor or Mix Ratio ³ :	NA	Alarm Setting (low) ⁴ :	NA
Reason for Adding Chemical ³ :	PH ADJUSTMENT	NSF Approved (Y/N) ¹¹ :	Y	Alarm Setting (high) ⁴ :	NA
		Date of last anti-siphon valve inspection/replacement ¹⁵ :			

III. Daily Reporting - Note: Water quality data reported on C-ADD form may be considered for compliance purposes.

Day	Treated Water ⁵ <input type="checkbox"/> Gallons <input type="checkbox"/> Mcg	Measured Chemical Used		Calculated Chemical Used (lbs) ⁶	Chemical Dosage ⁸ (mg/L)	Parameters Measured ⁷ , Results, Units and Method ⁹ - (G)rab or Continuous (A)nalyzer ¹⁰			O&M Notes/Comments ²² PWS note any equipment breakdown, off-line status, changes in purchased product or batch mixing day, measured parameters or dosages that are out of target range, etc.
		Volume ⁷ (gal/day)	Weight ⁷ (lbs/day)			a. FINISHED PH	b.	c.	
1	2.8		100		4.3	7.05			
2	2.6		100		4.6	7.10			
3	2.6		100		4.6	7.00			
4	2.6		100		4.6	6.90			
5	2.6		100		4.6	7.15			
6	2.6		100		4.6	7.05			
7	2.6		100		4.6	7.00			
8	2.5		100		4.8	7.10			
9	2.5		100		4.8	7.15			
10	2.6		100		4.6	7.20			
11	2.7		100		4.4	7.00			
12	2.6		100		4.6	7.05			
13	2.4		100		5.0	7.10			
14	2.7		100		4.4	7.00			
15	2.6		100		4.6	7.00			
16	2.6		100		4.6	6.95			
17	2.6		100		4.6	7.10			
18	2.6		100		4.6	7.10			
19	2.6		100		4.6	7.00			
20	2.6		100		4.6	7.15			
21	2.7		100		4.4	7.10			
22	2.7		100		4.4	7.00			
23	2.7		100		4.4	6.90			
24	2.7		100		4.4	6.95			
25	2.8		100		4.3	7.00			
26	2.5		100		4.8	7.15			
27	2.8		100		4.3	7.10			
28	2.6		100		4.6	7.15			
29	2.6		100		4.6	7.00			
30	2.6		100		4.6	7.05			
31	2.7		100		4.4	7.10			
Total			100						

Indicate total # of days the residual was off-target for the month (from Section II) Monthly Target Summary²²:

*Describe result (daily average, min/max, instantaneous reading, grab, etc), sample location (entry-point, before/after filters, tanks, etc.) and instrumentation used (SCADA, chart recorder, test kit, bench, etc.)²⁰:

a. Finished Water Ph Daily Average Test Kit

b.

c.

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

PWS Authorized Person - Signature & Date²⁴:
 William Costello 4-4-2022
 Print Name: William Costello Title: Chief Operator



Massachusetts Department of Environmental Protection – Drinking Water Program
CHEMICAL ADDITION REPORT – 310 CMR 11.15(4) Chemical Addition Reporting Requirements

C-ADD

I. PWS Information - Refer to MassDEP "Chemical Addition Report Guidance and Instructions" for details.

PWS Name ¹ :	RANDOLPH-HOLBROOK JW	Town ¹ :	RANDOLPH-HOLBROOK	PWSID ¹ :	424001
Treatment Plant Name ² :	RANDOLPH WATER PLANT	Treatment Plant ID# ² :	4244001-01T	Reporting Period ² :	MARCH 2022 Month Year

II. Chemical & Operational Information

Chemical Name ³ :	SODIUM BISULFATE	Purchased Strength ³ :	10-15	Target Range/min ¹² :	NA
Manufacturer ³ :	CARUS CORPORATION	Purchased Density (lbs/gal) ⁹ :	12.03	Target Dose ¹³ :	NA
Product Name ³ :	CARUS 3350	Dilution Factor or Mix Ratio ¹⁰ :	0.33	Alarm Setting (low) ¹⁴ :	NA
Reason for Adding Chemical ⁷ :	CORROSION INHIBITOR	NSF Approved (Y/N) ¹¹ :	Y	Alarm Setting (high) ¹⁴ :	NA
		Date of last anti-siphon valve inspection/replacement ¹⁵ :	NA		

III. Daily Reporting Note: Water quality data reported on C-ADD form may be considered for compliance purposes.

Day	Treated Water ⁸ <input type="checkbox"/> Gallons <input checked="" type="checkbox"/> MG	Measured Chemical Used		Calculated Chemical Used (lbs) ¹⁸	Chemical Dosage ¹⁹ (mg/l)	Parameters Measured ⁴ , Results, Units and Method ²⁰ - (G)rab or Continuous (A)nalyzer ²¹			O&M Notes/Comments ²² PWS note any equipment breakdown, off-line status, changes in purchased product or batch mixing day, measured parameters or dosages that are out of target range, etc.
		Volume ¹⁷ (gal/day)	Weight ¹⁷ (lbs/day)			a. FINISHED Ph <input checked="" type="checkbox"/> G <input type="checkbox"/> A	b. <input type="checkbox"/> G <input type="checkbox"/> A	c. <input type="checkbox"/> G <input type="checkbox"/> A	
1	2.8		50		2.1	7.05			
2	2.6		50		2.3	7.10			
3	2.6		50		2.3	7.00			
4	2.6		50		2.3	6.90			
5	2.6		50		2.3	7.15			
6	2.6		50		2.3	7.05			
7	2.6		50		2.3	7.00			
8	2.5		50		2.4	7.10			
9	2.5		50		2.4	7.15			
10	2.6		50		2.3	7.00			
11	2.7		50		2.2	7.00			
12	2.6		50		2.3	7.05			
13	2.4		50		2.5	7.10			
14	2.7		50		2.2	7.00			
15	2.6		50		2.3	7.00			
16	2.6		50		2.3	6.95			
17	2.6		50		2.3	7.10			
18	2.6		50		2.3	7.10			
19	2.6		50		2.3	7.00			
20	2.6		50		2.3	7.15			
21	2.7		50		2.2	7.10			
22	2.7		50		2.2	7.00			
23	2.7		50		2.2	6.90			
24	2.7		50		2.2	6.95			
25	2.8		50		2.1	7.00			
26	2.5		50		2.4	7.15			
27	2.8		50		2.1	7.10			
28	2.6		50		2.3	7.15			
29	2.6		50		2.3	7.00			
30	2.6		50		2.3	7.05			
31	2.7		50		2.2	7.10			

Total _____ Indicate total # of days the residual was off-target for the month (from Section II) Monthly Target Summary²³:

*Describe result (daily average, min/max, instantaneous reading, grab, etc), sample location (entry-point, before/after filters, tanks, etc.) and instrumentation used (SCADA, chart recorder, test kit, bench, etc.)²⁰:

a.	Finished Ph, Daily Average, Test Kit	I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge. PWS Authorized Person - Signature & Date ²⁴ : Print Name: William Cookery Title: Chief Operator
b.		
c.		



DBPR TT Compliance Report

I. PWS INFORMATION

PWS ID #: 4244001 City/Town: RANDOLPH
 PWS Name: RANDOLPH-HOLBROOK JOINT WATER PWS Class: COM NTNC TNC

DEP LOCATION (LOC) ID#	DEP Location Name	Date Collected	Collected By
<u>01S/10300</u>	<u>RAW WATER/COMBINED FILTER EFFLUENT</u>	<u>3-7-2022</u>	<u>Bill Costello</u>
SAMPLE NOTES			

II. COMPLIANCE CALCULATIONS

Month	# of Paired Samples	A: % Removal of TOC ¹	B: Required % Removal of TOC ²	Met Alternative Compliance Criteria	Alternative Criteria Result(s) ³ (See Below)	A ÷ B ⁴
4-21	1	35	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.00
5-21	1	42	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.20
6-21	1	38	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.09
7-21	1	42	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.20
8-21	1	46	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.31
9-21	1	43	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.23
10-21	1	45	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.29
11-21	1	43	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.23
12-21	1	43	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.23
1-22	1	39	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.17
2-22	1	36	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.03
3-22	1	63	35	<input type="checkbox"/> YES <input type="checkbox"/> NO		1.80
Sum of Past 12 Months:						14.78
Compliance Value (Sum of Past 12 Months/ 12):						1.23

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

PWS Authorized Signature: William Costello
 Date: 4-4-2022

Mail ONE copy of this report to your DEP Regional Office no later than 10 days after the end of the month in which you received this report or no later than 10 days after the end of the reporting period, whichever is sooner.

¹ Percent Removal: $(1 - (\text{Treated Water TOC} \div \text{Raw Water TOC})) \times 100$. If > 1 paired sample sets in any month report the average of all individual percent TOC removals (Example: % TOC Removal = (Average of Set 1 + Average of Set 2) ÷ 2).
² From table at 310-CMR 22.07E(10)(b)2.
³ As listed at 310 CMR 22.07E(10)(a)2 and 310 CMR 22.07E(10)(a)3, summarized as follows:

Alternative Compliance Criteria	Code Value	Result(s) to Report (RAA = Running Annual Average)
Source Water TOC <2.0 mg/L	SWTOC	RAA of source water TOC
Treated Water <2.0 mg/L	TWTOC	RAA of treated water TOC
Source Water TOC < 4.0 mg/L AND Alkalinity >60 mg/L (as CaCO ₃) AND TTHM/HAA5 ≤ 0.040/0.030 mg/L	COMBO	RAA of source water TOC, RAA of source water alkalinity, RAA of TTHM and HAA5
TTHM/HAA5 ≤ 0.040/0.030 mg/L AND only using chlorine	TTHM/HAA5	RAA of TTHM and HAA5
Source Water SUVA ≤ 2.0 L/mg-m	SWSUVA	RAA of treated water SUVA
Treated Water SUVA ≤ 2.0 L/mg-m	TWSUVA	RAA of treated water SUVA
Softening that lowers alkalinity to < 60 mg/L (as CaCO ₃)	SOFT60	RAA of treated water alkalinity
Softening that removes ≥ 10 mg/L (as CaCO ₃) of hardness	SOFT10	RAA of hardness (as CaCO ₃) removal

Note: All supplemental measurements and calculations used to meet the alternative criteria must be attached to this report.

⁴For any month where the system met an alternative compliance criteria a value of 1.0 may be inserted.

DEP REVIEW STATUS (Initial & Date)	Review Comments
<input type="checkbox"/> Accepted _____ <input type="checkbox"/> Disapproved _____	



Total Organic Carbon (TOC) Report doc rev 12/2020

I. PWS INFORMATION: Please refer to your DEP Water Quality Sampling Schedule (WQSS) to help complete this form

PWS ID #: 4244001

City / Town: RANDOLPH

PWS Name: RANDOLPH HOLBROOK WATER BOARD

PWS Class: COM [x] NTNC [] TNC []

Table with columns: DEP LOCATION (LOC) ID#, DEP Location Name, Sample Information, Date Collected, Collected By. Includes rows for Great Pond WTP - Raw Water and Combined Filter Effluent.

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #: M-MA022 Primary Lab Name: Analytical Balance Subcontracted?(Y/N) Y
Analysis Lab MA Cert. #: M-RI002 Analysis Lab Name: ESS Lab

Table for TOC Analyzed by (check one): PWS or Lab. Columns include TOC Result (mg/L), MDL (mg/L), MRL (mg/L), Dilution Factor, Lab Method, Date Analyzed, Primary Lab Sample ID#, Analytical Lab or PWS Sample ID#.

Surface or GWUDI systems >= 500 persons. Monthly source (raw) water TOC sampling is required at each surface/GWUDI source to qualify for and remain on reduced THM/HAA5 monitoring.

Surface or GWUDI sources using conventional filtration shall each month (unless monitoring is reduced): take one TOC sample at each treatment plant no later than the point of combined filter effluent turbidity monitoring representative of the treated (finished) water, one TOC source (raw) sample prior to any treatment, and one alkalinity source (raw) water sample - at a time representative

Table for Alkalinity Analyzed by (check one): PWS or Lab. Columns include Alkalinity Result (mg/L as CaCO3), MDL (mg/L), MRL (mg/L), Dilution Factor, Lab Method, Date Analyzed, Primary Lab Sample ID#, Analytical Lab or PWS Sample ID#.

If using conventional filtration - Raw water alkalinity must be measured at the same time as the raw water TOC sample is collected. Alkalinity analysis does not require the use of a Massachusetts or EPA certified laboratory

Table for LAB SAMPLE COMMENTS. Columns include LAB SAMPLE COMMENTS, Result Qualifier, Result Qualifier Description.

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Certified Operator or Primary Lab Director Signature: Laurel Stoddard Date: 3/22/2022

In accordance with 310 CMR 22.15(2), if mailing paper reports, TWO copies of this report must be received by your MassDEP Regional Office no later than 10 days after the end of the month in which the results are received or no later than 10 days after the end of the monitoring period, whichever is sooner. Please note: Electronic reporting (eDEP) deadline is the

DEP REVIEW STATUS (Initial & Date)
[] Accepted [] Disapproved
Review Comments
[] WQTS Data Entered



CERTIFICATE OF ANALYSIS

Chris Pelleteri
 Randolph - Holbrook Joint Water Board
 50 North Franklin Street
 Holbrook, MA 02343

Project Name: DOC SUVA
 Work Order Number: A2C0195
 Date Received: 03/07/2022

Sampled By: Bill Cookerly
 Location: Raw Water

Date Sampled: 3/7/22 9:00
 Matrix: Surface Water

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Detection Limit	DW/MCL/Recommended Limit #	Result
<i>Test Parameters</i>				LAB-ID#: <u>A2C0195-01</u>		
Dissolved Organic Carbon (Average)	5310B	3/8/2022	mg/L	0.500	---	4.42
SUVA	4153	3/8/2022	/100 ml	N/A	---	0.0201
UV 254	5910B	3/8/2022	abs/cm	0.002	---	0.088

Sampled By: Bill Cookerly
 Location: Combined Filter Effluent

Date Sampled: 3/7/22 9:00
 Matrix: Drinking Water

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Detection Limit	DW/MCL/Recommended Limit #	Result
<i>Test Parameters</i>				LAB-ID#: <u>A2C0195-02</u>		
Dissolved Organic Carbon (Average)	5310B	3/8/2022	mg/L	0.500	---	2.68
SUVA	4153	3/8/2022	/100 ml	N/A	---	0.0170
UV 254	5910B	3/8/2022	abs/cm	0.002	---	0.046

NA = Not Applicable
 ND = Not Detected
 < = Less Than
 > = Greater Than

Approved By: *Lancey Hood*

Work Order Narrative:

No unusual observations noted.

Subcontracted Analyses:

ESS Laboratory - Cranston, RI (M-RI002)

Dissolved Organic Carbon 5310B; UVA 254

REVIEWED
 By mgargasz at 12:08 pm, Mar 17, 2022



Massachusetts Department of Environmental Protection - Drinking Water Program
CHLORINE/CHLORAMINES - MONTHLY REPORT

CI

I. PWS INFORMATION:

PWS ID #: **4133000** PWS Name: **TOWN OF HOLBROOK**

City/Town: **HOLBROOK**

Class: COM NTNC TNC

II. ANALYTICAL INFORMATION: Refer to your MassDEP Coliform Sampling Plan and/or DBPR monitoring plan to help complete this section.

Type Measured: Free Chlorine Total Chlorine Combined Chlorine

Analytical Method: SM 4500-Cl: D E F G H I ASTM D1253-86

Notes:

DEP APPROVED SAMPLE SITE INFORMATION ¹		CHLORINE RESULT ² (mg/L)	COLLECTION AND ANALYSIS ³ :		COLLECTED AND ANALYZED BY:
DEP Sample Location Code # ⁴	DEP Approved Sample Location ¹		DATE	TIME	
RS 001	TOWN HALL	1.00	3/7/2022	07:30	J. Maclane
RS 004	COTTAGE VARIETY	1.28	3/7/2022	08:20	J. Maclane
RS 008E	STEWARTS POWER EQUIPMENT	.002	3/7/2022	09:30	J. Maclane
RS 006	COMMUNITY CENTER	1.10	3/7/2022	07:50	J. Maclane
RS 001	TOWN HALL	1.53	3/14/2022	07:38	J. Maclane
RS 004	COTTAGE VARIETY	1.57	3/14/2022	08:20	J. Maclane
RS 008E	STEWARTS POWER EQUIPMENT	.03	3/14/2022	08:40	J. Maclane
RS 006	COMMUNITY CENTER	1.16	3/14/2022	09:00	J. Maclane
RS 001	TOWN HALL	1.37	3/21/2022	07:20	J. Maclane
RS 004	COTTAGE VARIETY	1.60	3/21/2022	08:10	J. Maclane
RS 008E	STEWARTS POWER EQUIPMENT	.09	3/21/2022	08:50	J. Maclane
RS 006	COMMUNITY CENTER	1.25	3/21/2022	07:45	J. Maclane
RS 001	TOWN HALL	1.40	3/28/2022	07:30	J. Maclane
RS 004	COTTAGE VARIETY	1.39	3/28/2022	08:15	J. Maclane
RS 008E	STEWARTS POWER EQUIPMENT	.02	3/28/2022	09:00	J. Maclane
RS 006	COMMUNITY CENTER	1.15	3/28/2022	07:50	J. Maclane

¹ DEP Sample Type, Location Code#, and DEP Approved Sample Site Location must correspond to the same information on your DEP Total Coliform Sampling Plan.

² SWTR systems: HPC must be collected at distribution sites with zero chlorine residual and results reported on the DEP Bacteriological Monthly Report form and on the appropriate SWTR Form.

³ Collection and Analysis: Chlorine residual shall be measured in the field (immediately upon collection) at the same time and location in the distribution system as total coliforms are sampled. Record ND values as 0 (zero).

⁴ Sample Type: RS-Routine Distribution Sample, RO-Original Site Repeat, UR-Upstream Repeat, DR-Downstream Repeat, AR-Additional Repeat, or SS-Special Sample (as determined by DEP).

⁵ All DISTRIBUTION samples taken and analyzed shall be included in determining compliance, even if that number is greater than the minimum required. If you collect repeat coliform samples within the distribution system during the month, you must also measure for a detectable chlorine residual at the repeat sites and include these samples. DO NOT include raw water (RW) or plant tap (PT) chlorine residual samples in your calculations.

III. COMPLIANCE REPORTING: Total # of Samples Collected for Month⁶: **66** Average Chlorine Result of All Samples For Month⁵ (mg/L): **1.39**

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Certified Operator Signature and Date: *[Signature]* 4-4-2022

DEP Review Status: Accepted Disapproved Review Comments:



CHLORINE CHLORAMINES - MONTHLY REPORT

1. PWS INFORMATION:

PWS ID #: 424000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH Class: CM NTNG TNG

II. ANALYTICAL INFORMATION: Refer to your MassDEP Chlorine Sampling Plan and/or Disinfection Byproduct Monitoring Plan to help complete this section.

Type Measured: Free Chlorine Total Chlorine Combined Chlorine Analytical Method: SM-4500-Cl DP E F G H I ASTM D1289-06

Notes:

DEP Sample Type	DEP Location Code	DEP APPROVED SAMPLER SITE INFORMATION		CHLORINE RESULT (mg/L)	COLLECTION AND ANALYSIS		COLLECTED AND ANALYZED BY
		DEP Approved Sample Location	PIPE APPROVED SAMPLER LOCATION		DATE	TIME	
RS	003	TOWER HILL SCHOOL	ADAMS STREET	1.41	3/7/22	10:15 AM	A-PIERRE-LOUIS
RS	004	JFK SCHOOL	20 HURLEY DRIVE	1.46		7:30 AM	
RS	006	MARTIN EL. YOUNG SCHOOL	COURTNEY DRIVE	1.98		8:00 AM	
RS	009	STANLEY INN	1874 NORTH MAIN STREET	1.61		11:30 AM	
RS	008	NORTH MIDDLE SCHOOL	HIGH STREET	1.35		11:00 AM	
RS	011	MOBIL STATION	88 MAZZEO DRIVE	1.44		9:30 AM	
RS	012	777 NORTH STREET	FOOD SHOP	1.30		9:00 AM	
RS	014	777 NORTH MAIN STREET		NO ACCESS	DVE TO	CAVLD-19	
RS	016	317 NORTH MAIN ST	OAK GROVE STANDPIPE	1.43		8:30 AM	
RS	017	SOUTH MAIN STREET	STANDPIPE	1.14		10:00 AM	
RS	017	SOUTH MAIN STREET	STANDPIPE	1.13		8:15 AM	

DEP Sample Type, Location Code, and DEP Approved Sampler Site Location must correspond to the same information on your DEP Total Chlorine Sampling Plan. SWTR systems that have no chlorine residual and results reported on the DEP Analytical Monthly Report form and on the appropriate SWTR Form. Collection and Analysis Chlorine residual shall be measured in the field (immediately upon collection) at the same time and location in the distribution system as total chlorine are sampled. Record WQ values as 0 (zero). Sample Type: Free Chlorine Chlorine Residual, FC-Original Site Report, FC-Composite Report, FC-Additional Report, or FC-Special Sample (as determined by DEP). All analytical results are reported in mg/L. If you collect representative samples within the distribution system during the month, you must also measure for a detailed chlorine residual at the repeat sites and include these samples. DO NOT include raw water (RW) or plant tap (PT) chlorine residual samples in your calculations.

DEP Review Status: Accepted Disapproved Review Comments: le Average Chlorine Residual for Month: 1.39

City/Town: RANDOLPH Prepared by: William Gately Date: 4-4-2022

DEP Review Status: Accepted Disapproved Review Comments: le



CHLORINE/CHLORAMINES - MONTHLY REPORT

5. PWS INFORMATION:

PWS ID #: 0244000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH Class: CM NTNG TNG

11. ANALYTICAL INFORMATION: Refer to your MassDEP Coliform Sampling Plan and/or DMR monitoring plan to help complete this section.

Type Measured: Free Chlorine Total Chlorine Combined Chlorine Analytical Method: SM-4500-Cl ID IE IF IG IH ASTM D1289-86

Notes:

DEP APPROVED SAMPLE SITE INFORMATION		CHLORINE RESULT (mg/L)	COLLECTION AND ANALYSIS DATE	COLLECTED AND ANALYZED BY
DEP Sample Type	DEP Location Code	DEP Approved Sample Location	DATE	TIME
RS	003	TOWER HILL SCHOOL... ADAMS STREET	3/14/2011	10:00 AM
RS	004	JFK SCHOOL... 20 HURLEY DRIVE		7:30 AM
RS	006	MARTINE L. YOUNG SCHOOL-COURTNEY DRIVE		8:00 AM
RS	008	CAMPBELL INN... 1574 NORTH MAIN STREET		11:00 AM
RS	008	NORTH MIDDLE SCHOOL... HIGH STREET		10:30 AM
RS	011	MOBIL STATION... 88 MAZZEO DRIVE		9:30 AM
RS	012	7-11 FOOD SHOP... 076 NORTH STREET		9:00 AM
RS	014A	EVERWASE... 177 NORTH MAIN STREET	DVE	NO ACCESS
RS	016	AXX AVE - 317 NORTH MAIN STREET	TS	8:30 AM
RS	017	OAK GROVE STANDPIPE		10:15 AM
RS	017	SOUTH MAIN STREET STANDPIPE		8:15 AM

DEP Sample Type, Location Code, and DEP Approved Sample Site Location must correspond to the same information on your DEP Total Coliform Sampling Plan. Sampling systems that may be collected at distribution sites with zero chlorine residual and results reported on the DEP Sanitological Monthly Report form and on the appropriate SWTR Form. Coliform and Ammonia Chloride residual must be measured in the field (immediately upon collection) at the same time and location in the distribution system as total chlorine. Record this value as 0 (zero). Sample Type: Residual Chlorine Sample, FC-Original Site Report, FC-Plant Site Report. All elevated chlorine samples taken and analyzed for determining compliance, even if that number is greater than the minimum required, if you would represent compliance within the distribution system during the month, you must also measure for a detectable chlorine residual at the repeat site and include these samples. Do NOT include raw water (RW) or plant tap (PT) chlorine residual samples in your calculations.

12. COMPLIANCE PERFORMANCE: Total # of Samples Collected for Month: 66 Average Chlorine Residual of All Samples for Month: (mg/L): 1.39

I certify under penalties of law that I am the person authorized to fill out this form and the information furnished herein is true, accurate and complete to the best extent of my knowledge.

DEP Review Status: Accepted Disapproved Review Comments: William Corley 4-4-2011



CHLORINE CHLORAMINES - MONTHLY REPORT

1. PWS INFORMATION:

PWS ID #: 4244000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH Class: CM NTNG TNG

II. ANALYTICAL INFORMATION: Refer to your Massdep California Sampling Plan and/or DEPR monitoring plan to help complete this section.

Type Measured: Free Chlorine Total Chlorine Combined Chlorine Analytical Method: SM-4500-Cl D E F G H I ASTM D1268-06

Notes:

DEPR Sample Type	DEPR Location Code	DEPR APPROVED SAMPLE SITE INFORMATION		CHLORINE RESULT (mg/L)	COLLECTION AND ANALYSIS		COLLECTED AND ANALYZED BY
		DEPR Approved Sample Location	DEPR Approved Sample Location		DATE	TIME	
RS	003	TOYNER HILL SCHOOL	ADAMS STREET	1.54	3/21/22	10:00 AM	A. PIERRE-LOUIS
RS	004	JFK SCHOOL	20 HURLEY DRIVE	1.73		7:30 AM	
RS	006	MARTIN E. YOUNG SCHOOL	COURTNEY DRIVE	1.36		8:00 AM	
RS	008	WYNDHAM INN	1874 NORTH MAIN STREET	2.09		11:30 AM	
RS	008	NORTH MIDDLE SCHOOL	HIGH STREET	1.73		11:00 AM	
RS	011	MOBIL STATION	88 MAZZEO DRIVE	1.69		9:30 AM	
RS	012	7-11	FOOD SHOP 676 NORTH STREET	1.50		9:00 AM	
RS	014	EMERALD GAZE	177 NORTH MAIN STREET	NO ACCESS	DUE TO COVID-19		
RS	014E	AXP HTS	317 NORTH MAIN STREET	1.83		8:30 AM	
RS	016	OAK GROVE STANDPIPE		1.40		10:15 AM	
RS	017	SOUTH MAIN STREET STANDPIPE		1.26		8:15 AM	

DEPR Sample Type, Location Code, and DEPR Approved Sample Site Location must correspond to the same information on your DEPR Total Chlorine Sampling Plan. SWTR system PWS that is collected at distribution area with zero chlorine content and results reported on the DEPR Analytical Monthly Report form and on the appropriate SWTR Form. Collection and Analytical Method must be reported at the time the sample is collected in the distribution system as total chlorine are sampled, record this values as 0 (zero). Sample Type (RS) require Distribution Sample, RS-Original Site Report, DE-Original Report, DE-Additional Report, or DE-Original Sample (as determined by DEPR). All DEPR (RS) samples taken and analyzed shall be included in determining compliance, even if that number is greater than the minimum required, if you collect representative samples within the distribution system during the month, you must also measure for a detectable chlorine residual at the repeat area and include these samples, DO NOT include raw water (RW) or plain tap (PT) chlorine residual samples in your calculations.

DEPR Compliance Requirements: Tested at of samples collected for month: 66 Average Chlorine Residual of All Samples for Month: 1.59

I certify my personnel or that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Certified Operator Signature and Date: [Signature] 4-4-2022

DEPR Review Status: Accepted Disapproved Review Comments:



CHLORINE CHLORAMINES - MONTHLY REPORT

I. PWS INFORMATION:

PWS ID #: 4244000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH Class: GWM NTNG TNG

II. ANALYTICAL INFORMATION: Refer to your MassDEP Golfform Sampling Plan and/or DEPR monitoring plan to help complete this section.

Type Measured: Free Chlorine Total Chlorine Combined Chlorine Analytical Method: SM-4500-Cl: D E F G H ASTM D1269-06

Notes:

DEP APPROVED SAMPLE SITE INFORMATION		CHLORINE RESULT (mg/L)	COLLECTION AND ANALYSIS ¹		COLLECTED AND ANALYZED BY:
DEP Sample Type	DEP Location Code	DEP Approved Sample Location	DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	3-28-21	10:57 AM	W. SOO Peterson
RS	004	JFK SCHOOL - 20 HURLEY DRIVE		7:35 AM	
RS	006	MARTIN E. YOUNG SCHOOL - COURTNEY DRIVE		7:58 AM	
RS	006	CAMPBELL INN - 1374 NORTH MAIN STREET		11:04 AM	
RS	006	NORTH MIDDLE SCHOOL - HIGH STREET		11:15	
RS	011	MOBIL STATION - 60 MAZZEO DRIVE		10:15 AM	
RS	012	7-11 FOOD SHOP - 676 NORTH STREET		8:55 AM	
RS	014	EVERYONE - 277 NORTH MAIN STREET		NO ACCESS	
RS	016	ASP AUTO - 317 OAK GROVE ST		9:55 AM	
RS	016	OAK GROVE STANDPIPE		10:32 AM	
RS	017	SOUTH MAIN STREET STANDPIPE		8:20 AM	

¹ DEP Sample Type, Location Code, and DEP Approved Sample Site Location must correspond to the same information on your DEP Total Chlorine Sampling Plan. SWTR system (PWS) must be collected at distribution sites with zero chlorine residual and results reported on the DEP Analytical Monthly Report Form and on the appropriate SWTR Form. Collection and Analytical Chlorine residual must be measured in the field (immediately upon collection) at the same time and location in the distribution system as total chlorine are sampled. Report WQ values as 0 (zero). Sample Type: Residual Chlorine Sample, FC-Chlorine Residual, FC-Chlorine Residual, FC-Chlorine Residual, FC-Chlorine Residual, FC-Chlorine Residual, FC-Chlorine Residual, FC-Chlorine Residual. All elevated (total) samples taken and analyzed that are included in determining compliance, even if that number is greater than the minimum required, if you collect representative samples within the distribution system during the month, you must also measure for a chlorine residual at the repeat site and include these samples. DO NOT include raw water (RW) or plant tap (PT) chlorine residual samples in your calculations.

AN. COMPLIANCE WITH CHLORINE: Total # of Samples Collected for Month: 106 Average Chlorine Residual of All Samples for Month: (mg/L): 1.39

I certify under penalty of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Publicly Available Chlorine Residual Report
 Date: 4-4-2022
 Signature: William Cobley
 Title: Plant Manager

DEP Review Status: Accepted Disapproved Review Comments:



Massachusetts Department of Environmental Protection - Drinking Water Program

TURBIDITY - INDIVIDUAL FILTER MONITORING
For Conventional or Direct Filtered Systems

SWTR
J

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I. PWS INFORMATION

PWS ID#: 4244001 PWS Name: RANDOLPH-HOLBROOK JOINT WATER PWS Town: Randolph
Treatment Plant Name: RANDOLPH WATER PLANT Reporting Period: Month: Mar Year: 2022
Total # of Filters at Treatment Plant: 8

II. MONTHLY REPORTING

Filtered Water Turbidity Measured: [X] Individual Filter Effluent (IFE) or [] Combined Filter Effluent (CFE)2
Analytical Method: [] SM 2130B [] EPA 180.1 [] GLI Method 2 (Great Lakes)

Table with 3 columns: Question #, Question Text, and Answer. Contains 7 questions regarding filter monitoring, measurement frequency, and turbidity levels.

For each "Yes" response to question #4, #5, #6, or #7 above: Report the following information in the table below.

Table with 4 columns: Filter #, Turbidity Result (NTU), Date, Reason for Exceedance (if known). Includes a note to attach additional documents as necessary for detailed explanations.



Massachusetts Department of Environmental Protection - Drinking Water Program
TURBIDITY - INDIVIDUAL FILTER MONITORING
 For Conventional or Direct Filtered Systems

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III. DAILY REPORTING

Day	Filter Number 1		Filter Number 2		Filter Number 3		Filter Number 4	
	³ Max Day NTU	⁴ Max after 4 Hours NTU	³ Max Day NTU	⁴ Max after 4 Hours NTU	³ Max Day NTU	⁴ Max after 4 Hours NTU	³ Max Day NTU	⁴ Max after 4 Hours NTU
1	0.109000		0.102000		0.086000	0.249000	0.082000	0.325000
2	0.107000	0.158000	0.099000	0.122000	0.024000	0.056000	0.066000	0.276000
3	0.109000	0.211000	0.101000	0.143000	0.023000	0.229000	0.049000	0.307000
4	0.019000	0.152000	0.016000	0.256000	0.022000		0.054000	
5	0.021000		0.023000		0.018000	0.217000	0.048000	0.298000
6	0.020000	0.223000	0.017000	0.245000	0.019000	0.108000	0.052000	0.366000
7	0.021000	0.102000	0.018000	0.293000	0.020000	0.117000	0.051000	0.183000
8	0.020000	0.064000	0.016000	0.148000	0.022000		0.056000	
9	0.021000		0.020000		0.018000	0.047000	0.050000	0.173000
10	0.019000	0.157000	0.016000	0.212000	0.020000	0.195000	0.050000	0.275000
11	0.019000	0.154000	0.015000	0.169000	0.018000	0.244000	0.049000	0.233000
12	0.019000	0.096000	0.016000	0.201000	0.020000		0.059000	
13	0.021000		0.021000		0.019000	0.184000	0.242000	0.190000
14	0.059000	0.059000	0.017000	0.072000	0.029000	0.058000	0.051000	0.141000
15	0.019000	0.111000	0.016000	0.059000	0.032000	0.070000	0.050000	0.098000
16	0.020000	0.076000	0.016000	0.082000	0.021000		0.053000	
17	0.022000		0.021000		0.019000	0.077000	0.051000	0.123000
18	0.021000	0.098000	0.018000	0.096000	0.022000	0.110000	0.055000	0.151000
19	0.020000	0.107000	0.017000	0.088000	0.019000	0.133000	0.052000	0.124000
20	0.022000	0.125000	0.020000	0.178000	0.027000		0.059000	
21	0.026000		0.024000		0.026000	0.150000	0.057000	0.159000
22	0.022000	0.069000	0.017000	0.105000	0.022000	0.108000	0.055000	0.070000
23	0.021000	0.068000	0.018000	0.068000	0.020000	0.117000	0.055000	0.180000
24	0.022000	0.058000	0.018000	0.095000	0.022000		0.062000	
25	0.024000		0.022000		0.021000	0.096000	0.060000	0.141000
26	0.021000	0.143000	0.019000	0.073000	0.022000	0.111000	0.059000	0.142000
27	0.022000	0.104000	0.020000	0.105000	0.023000	0.105000	0.059000	0.278000
28	0.023000	0.084000	0.017000	0.086000	0.026000		0.072000	
29	0.023000		0.020000		0.019000	0.127000	0.065000	0.093000
30	0.020000	0.064000	0.018000	0.046000	0.064000	0.037000	0.104000	0.070000
31	0.022000	0.116000	0.020000	0.101000	0.024000	0.085000	0.061000	0.117000

- Systems shall conduct continuous turbidity monitoring of the filter effluent for each individual filter at the filtration facility and record turbidity measurements every 15-minutes. Record the actual turbidity result at the specified interval of time. Do not average turbidity measurements. Individual filter turbidity records must be retained for 3 years and kept on file for MassDEP review.
- Systems serving less than 10,000: If the treatment system has only one or two filters, the supplier may conduct continuous monitoring of the CFE turbidity in lieu of individual filter effluent (IFE) turbidity monitoring. If there are two filters, a continuous turbidity monitor can be installed on the combined filter effluent. If a CFE problem appears, follow-up action must then be completed on both filters.
- Enter the highest daily 15-minute interval turbidity measurement recorded for the filter specified.
- Enter the highest daily 15-minute interval turbidity measurement recorded at the end of the first four hours of continuous filter operation after the filter has been backwashed or otherwise taken offline.

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

PWS Authorized Signature: _____

William Coakley

Date: 4/8/2022

Title: Chief Plant Operator

In accordance with 310 CMR 22.15(2), if mailing paper reports, TWO copies of this report must be received by your MassDEP Regional Office no later than 10 days after the end of the month in which the results are received or no later than 10 days after the end of the monitoring period, whichever is sooner. Please note: Electronic reporting (eDEP) deadline is the same as above.



Massachusetts Department of Environmental Protection - Drinking Water Program
TURBIDITY - INDIVIDUAL FILTER MONITORING
 For Conventional or Direct Filtered Systems

SWTR
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III. DAILY REPORTING

Day	Filter Number <u>5</u>		Filter Number <u>6</u>		Filter Number <u>7</u>		Filter Number <u>8</u>	
	³ Max Day NTU	⁴ Max after 4 Hours NTU	³ Max Day NTU	⁴ Max after 4 Hours NTU	³ Max Day NTU	⁴ Max after 4 Hours NTU	³ Max Day NTU	⁴ Max after 4 Hours NTU
1	0.073000	0.171000	0.190000	0.132000	0.051000	0.290000	0.126000	0.170000
2	0.074000	0.168000	0.040000	0.181000	0.055000		0.133000	
3	0.080000		0.042000		0.052000	0.143000	0.128000	0.231000
4	0.078000	0.163000	0.047000	0.126000	0.054000	0.212000	0.129000	0.342000
5	0.076000	0.180000	0.049000	0.134000	0.054000	0.194000	0.131000	0.299000
6	0.078000	0.275000	0.045000	0.267000	0.059000		0.144000	
7	0.096000		0.045000		0.058000	0.240000	0.136000	0.350000
8	0.078000	0.300000	0.038000	0.186000	0.057000	0.132000	0.136000	0.189000
9	0.077000	0.142000	0.036000	0.091000	0.057000	0.162000	0.135000	0.279000
10	0.079000	0.272000	0.036000	0.164000	0.060000		0.145000	
11	0.082000		0.042000		0.057000	0.168000	0.135000	0.362000
12	0.078000	0.320000	0.036000	0.234000	0.058000	0.181000	0.019000	0.105000
13	0.080000	0.144000	0.039000	0.077000	0.059000	0.119000	0.020000	0.076000
14	0.082000	0.150000	0.036000	0.183000	0.062000		0.022000	
15	0.087000		0.043000		0.060000	0.152000	0.020000	0.169000
16	0.083000	0.108000	0.036000	0.066000	0.060000	0.120000	0.021000	0.078000
17	0.087000	0.186000	0.040000	0.095000	0.062000	0.151000	0.022000	0.141000
18	0.087000	0.174000	0.037000	0.110000	0.068000		0.026000	
19	0.093000		0.044000		0.064000	0.162000	0.021000	0.218000
20	0.090000	0.156000	0.069000	0.108000	0.065000	0.131000	0.022000	0.163000
21	0.092000	0.144000	0.043000	0.093000	0.065000	0.127000	0.023000	0.094000
22	0.074000	0.131000	0.076000	0.054000	0.069000		0.026000	
23	0.071000		0.049000		0.067000	0.110000	0.021000	0.207000
24	0.065000	0.162000	0.037000	0.129000	0.066000	0.171000	0.022000	0.103000
25	0.069000	0.184000	0.038000	0.122000	0.069000	0.150000	0.022000	0.079000
26	0.056000	0.153000	0.039000	0.122000	0.073000		0.026000	
27	0.060000		0.046000		0.071000	0.172000	0.023000	0.096000
28	0.055000	0.148000	0.041000	0.134000	0.071000	0.145000	0.021000	0.085000
29	0.054000	0.111000	0.045000	0.061000	0.096000	0.112000	0.021000	0.064000
30	0.058000	0.124000	0.039000	0.070000	0.075000		0.024000	
31	0.066000		0.046000		0.072000	0.155000	0.022000	0.110000

- Systems shall conduct continuous turbidity monitoring of the filter effluent for each individual filter at the filtration facility and record turbidity measurements every 15-minutes. Record the actual turbidity result at the specified interval of time. Do not average turbidity measurements. Individual filter turbidity records must be retained for 3 years and kept on file for MassDEP review.
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- Enter the highest daily 15-minute interval turbidity measurement recorded for the filter specified.
- Enter the highest daily 15-minute interval turbidity measurement recorded at the end of the first four hours of continuous filter operation after the filter has been backwashed or otherwise taken offline.

I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

PWS Authorized Signature: _____

William Conley

Date: 4/8/2022

Title: Chief Plant Operator

In accordance with 310 CMR 22.15(2), if mailing paper reports, TWO copies of this report must be received by your MassDEP Regional Office no later than 10 days after the end of the month in which the results are received or no later than 10 days after the end of the monitoring period, whichever is sooner. Please note: Electronic reporting (eDEP) deadline is the same as above.



Massachusetts Department of Environmental Protection - Drinking Water Program
Disinfection Byproducts Rule Compliance Report

DBPR

I. PWS INFORMATION: Please refer to your DBPR Monitoring Plan to help complete this form.

PWS ID #: 4244001 City/Town: RANDOLPH
 PWS Name: RANDOLPH-HOLBROOK JOINT WATER PWS Class: COM NTNC TNC
 Monitoring Period (YEAR): 2022 Monitoring Period (QUARTER): Q1 (Jan-Mar) Q2 (Apr-Jun) Q3 (Jul-Sep) Q4 (Oct-Dec)

II. FOR SYSTEMS USING CHLORINATION

A. Trihalomethanes (TTHM)
 Total Number of TTHM Samples: _____ Quarterly Average: _____ µg/L
 Was the Running Annual Average MCL (80 µg/L) exceeded? Yes No Running Annual Average: _____ µg/L

B. Haloacetic Acids (HAA5)
 Total Number of HAA5 Samples: _____ Quarterly Average: _____ µg/L
 Was the Running Annual Average MCL (60 µg/L) exceeded? Yes No Running Annual Average: _____ µg/L

C. Chlorine/Chloramines
 Total Number of Samples: _____ Monthly Averages: _____ mg/L
 Month 1: 69 JAN 1.42 mg/L
 Month 2: 65 FEB 1.48 mg/L
 Month 3: 66 MARCH 1.39 mg/L
 Quarterly Average: 1.43 mg/L
 Was the Running Annual Average MRDL (4.0 mg/L) exceeded? Yes No Running Annual Average: 1.19 mg/L

D. Total Organic Carbon - raw (TOC) (Required for SW or GWUDI systems >499 seeking or approved to reduce THM/HAA5 monitoring.) Plant Name: _____
 (Attach additional sheet(s) to report more than 1 plant)
 Total Number of Samples: _____ Monthly Averages: _____ mg/L
 Month 1: _____ (report all 3 months per quarter)
 Month 2: _____
 Month 3: _____ Quarterly Average: _____ mg/L
 Was the (4.0 mg/L) threshold exceeded? Yes No Running Annual Average: _____ mg/L

III. FOR SYSTEMS USING OZONATION

E. Bromate (treated) Plant Name: _____
 Total Number of Samples: _____ Monthly Averages: _____ mg/L
 Month 1: _____ (report all 3 months per quarter)
 Month 2: _____ Quarterly Average: _____ mg/L
 Month 3: _____
 Was the Running Annual Average MCL (0.010 µg/l) exceeded? Yes No Running Annual Average: _____ mg/L

F. Bromide (raw) Plant Name: _____
 Required for systems seeking or approved to reduce Bromate monitoring
 Total Number of Samples: _____ Monthly Averages: _____ mg/L
 Month 1: _____ (report all 3 months per quarter)
 Month 2: _____ Quarterly Average: _____ mg/L
 Month 3: _____
 Was the (0.05 mg/l) threshold exceeded? Yes No Running Annual Average: _____ mg/L

IV. FOR SYSTEMS USING CHLORINE DIOXIDE

Report compliance information on your chlorine dioxide (Daly Samples) form.
 I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

Primary Certified Operator Signature: William Cook Date: 4-4-2022

DEFINITIONS	
MONTHLY AVERAGE:	Monthly average = average of all results within the current month.
QUARTERLY AVERAGE:	Quarterly Average = average result of all locations sampled during monitoring period
RUNNING ANNUAL AVERAGE:	Running Annual Average = Average of 4 quarters. Average of this quarter and three prior consecutive quarterly averages (for systems on quarterly monitoring)
TOTAL NUMBER OF SAMPLES:	Total number of samples collected during the monitoring period.

NOTE: Record and calculate all ND or <MDL results as the number zero (0).

Submit one copy of this form each quarter to your DEP regional office (by Jan 10th, April 10th, July 10th, and Oct 10th of each year).

DEP REVIEW STATUS (Initial & Date)

<input type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	Review Comments
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