



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

September 15, 2021

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
August, 2021 Randolph/Holbrook
Joint Water System, PWS #424001

Gentlemen:

Enclosed please find all reports as referenced above for the month of August, 2021. The HPC results for Form G have not come in yet. Should there be any questions, please do not hesitate to call.

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: AUGUST Year: 2021

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) x 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	<u>1.77</u>	6	<u>2.06</u>	11	<u>1.80</u>	16	<u>1.95</u>	21	<u>1.94</u>	26	<u>2.03</u>	31	<u>2.17</u>
2	<u>2.01</u>	7	<u>1.96</u>	12	<u>1.79</u>	17	<u>1.83</u>	22	<u>1.68</u>	27	<u>2.09</u>	Residual Measured <input checked="" type="checkbox"/> Free Cl ₂ <input type="checkbox"/> Total Cl ₂ <input type="checkbox"/> Combined Cl ₂	
3	<u>1.82</u>	8	<u>1.87</u>	13	<u>1.79</u>	18	<u>1.71</u>	23	<u>1.82</u>	28	<u>2.11</u>		
4	<u>1.99</u>	9	<u>2.00</u>	14	<u>1.88</u>	19	<u>1.84</u>	24	<u>1.94</u>	29	<u>1.99</u>		
5	<u>1.85</u>	10	<u>1.90</u>	15	<u>1.94</u>	20	<u>1.68</u>	25	<u>2.01</u>	30	<u>1.88</u>		

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) Residuals < 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: — # HPC sites > 500/mL: — # HPC sites ≤ 500/mL: —

<u>70</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>—</u>	= b	# of sites HPC samples were analyzed instead of Cl ₂ residual measurements
<u>—</u>	= c	# of sites where no Cl ₂ residual was detected and no HPC sample was analyzed
<u>—</u>	= d	# of sites where no Cl ₂ residual was detected and HPC > 500 CFU/mL
<u>—</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 = — 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 fill out this form and the information contained herein is true. DATE: 9/16/2021 William Coakley Chief Operator



Massachusetts Department of Environmental Protection - Drinking Water Program
 TURBIDITY DATA SHEET FOR FILTERED SYSTEMS

SWTR
F

PWS INFORMATION

PWSID#: 4244001 PWS Name: RANDOLPH-HOLBROOK JOINT WATER PWS Town: RANDOLPH
 Treatment Plant Name: RANDOLPH WATER PLANT Reporting Period → Month: AUGUST Year: 2021

DAILY REPORTING

Filtered Water Turbidity Measured: (check only one) Combined Filter Effluent Individual Filter Effluent¹ Clearwell Plant Effluent

Filtration Technology:

Conventional Direct Alternative Slow Sand Diatomaceous Earth

Monthly Turbidity (95%) NTU Limit = 0.3 Max Day Turbidity NTU Limit = 1
 Monthly Turbidity (95%) NTU Limit = 1 Max Day Turbidity NTU Limit = 5

Day	Max Filtered Water Turbidity Result (NTU)	Number of Turbidity Measurements	Number of Turbidity Measurements - Monthly (95%) NTU Limit	Number of Turbidity Measurements - Max Day NTU Limit
	.09	6	6	0
	.05	6	6	0
	.05	6	6	0
	.05	6	6	0
	.05	6	6	0
	.04	6	6	0
	.05	6	6	0
	.10	6	6	0
	.11	6	6	0
	.05	6	6	0
	.06	6	6	0
	.05	6	6	0
	.04	6	6	0
	.05	6	6	0
	.04	6	6	0
	.04	6	6	0
	.05	6	6	0
	.05	6	6	0
	.05	6	6	0
	.04	6	6	0
	.04	6	6	0
	.05	6	6	0
	.07	6	6	0
	.09	6	6	0
	.07	6	6	0
	.06	6	6	0
	.06	6	6	0
	.07	6	6	0
	.06	6	6	0
	.06	6	6	0
	.06	6	6	0
Totals		186	186	0

% Turbidity Meeting 95% Limit
 = B/A x 100%
 (Enter on SWTR - Form G)

- May be used by systems serving less than 10,000 persons, subject to DEP approval.
- Enter the Maximum Filtered Water Turbidity Result recorded each day, at the 4th hour or other approved interval.
- Enter the Total # of Turbidity measurements taken for each day. Measurements must be taken at a minimum of 4-hour intervals (i.e. 6 readings per day). For continuous monitors count each 4-hour period as 1 measurement. Record the actual turbidity result at the specified interval of time. Do not average turbidity measurements. If DEP approved, 15-minute readings (i.e. 96 readings per day) may be submitted. Filtered turbidity data must be kept on file for DEP review.
- Out of the # of turbidity measurements taken and recorded in the previous column, enter the number of turbidity measurements that were less than or equal to the Monthly (95%) NTU Limit for the filtration technology used.
- If at any time the filtered turbidity Max Day NTU Limit is exceeded, the DEP must be notified no later than the end of the next business day. For each exceedance, record the turbidity value(s) and date(s) on SWTR - Form G

For more information on how to help and the person authorized to complete this form, please contact the person in charge of the program or contact the DEP at 1-800-352-9635.

PWS Authorized Signature: William Cooker
 Date: 9-1-2021 Title: Chief Plant Operator



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

I. PWS INFORMATION:

PWSID#: 4244001 PWS Name: Randolph-Holliston Joint Water PWS Town: Randolph
 Treatment Plant Name: Randolph Water Plant Reporting Period → Month: AUGUST Year: 2021
 Disinfectant¹: Chlorine Gas/Vol/Enter 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	1.77	50	88.5	6.05	20.6	11	8.1	<input type="checkbox"/> Yes
2	2,400	2.01	50	100.5	5.95	21.0	11	9.1	<input type="checkbox"/> Yes
3	2,400	1.82	50	91	5.90	21.4	11	8.3	<input type="checkbox"/> Yes
4	2,400	1.99	50	99.5	6.05	22.0	11	9.1	<input type="checkbox"/> Yes
5	2,400	1.85	50	92.5	6.00	22.3	11	8.4	<input type="checkbox"/> Yes
6	2,400	2.06	50	103	5.80	22.3	11	9.4	<input type="checkbox"/> Yes
7	2,400	1.96	50	98	5.90	22.6	11	8.9	<input type="checkbox"/> Yes
8	2,400	1.87	50	93.5	6.10	22.4	11	8.5	<input type="checkbox"/> Yes
9	2,400	2.00	50	100	6.00	22.7	11	9.1	<input type="checkbox"/> Yes
10	2,400	1.90	50	95	6.00	23.0	11	8.6	<input type="checkbox"/> Yes
11	2,400	1.80	50	90	6.10	23.0	11	8.2	<input type="checkbox"/> Yes
12	2,400	1.79	50	89.5	6.15	22.6	11	8.1	<input type="checkbox"/> Yes
13	2,400	1.79	50	89.5	6.05	22.6	11	8.1	<input type="checkbox"/> Yes
14	2,400	1.88	50	94	6.05	23.0	11	8.6	<input type="checkbox"/> Yes
15	2,400	1.94	50	97	6.10	23.4	11	8.8	<input type="checkbox"/> Yes
16	2,400	1.95	50	97.5	5.90	23.0	11	8.9	<input type="checkbox"/> Yes
17	2,400	1.83	50	91.5	6.05	22.9	11	8.3	<input type="checkbox"/> Yes
18	2,400	1.71	50	85.5	5.85	22.8	11	7.8	<input type="checkbox"/> Yes
19	2,400	1.84	50	92	5.90	22.9	11	8.4	<input type="checkbox"/> Yes
20	2,400	1.68	50	84	6.05	23.1	11	7.6	<input type="checkbox"/> Yes
21	2,400	1.94	50	97	6.10	22.8	11	8.8	<input type="checkbox"/> Yes
22	2,400	1.68	50	84	6.15	22.5	11	7.6	<input type="checkbox"/> Yes
23	2,400	1.82	50	91	6.10	22.9	11	8.3	<input type="checkbox"/> Yes
24	2,400	1.94	50	97	5.90	23.0	11	8.8	<input type="checkbox"/> Yes
25	2,400	2.01	50	100.5	5.80	23.1	11	9.1	<input type="checkbox"/> Yes
26	2,400	2.03	50	101.5	5.90	23.5	11	9.2	<input type="checkbox"/> Yes
27	2,400	2.09	50	104.5	6.10	23.9	11	9.5	<input type="checkbox"/> Yes
28	2,400	2.11	50	105.5	6.20	23.0	11	9.6	<input type="checkbox"/> Yes
29	2,400	1.99	50	99.5	6.10	22.4	11	9.1	<input type="checkbox"/> Yes
30	2,400	1.88	50	94	5.95	22.3	11	8.6	<input type="checkbox"/> Yes
31	2,400	2.17	50	108.5	5.90	22.0	11	9.9	<input type="checkbox"/> Yes

- 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.
- Peak hourly flow means the highest pumpage hour during the day, not the absolute peak flow at any instant.
- The residual disinfectant concentration(s) ("C") of the water before or at the first customer must be measured each day during peak hourly flow.
- 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.
- 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.
- 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.
- Use Inactivation Tables at 310 CMR 22.20A Tables 1.1 – 1.6, 2.1 and/or 3.1
- 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.
- 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 Cookerly

Date: 9-1-2021

Title: Chief Plant 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 :	AUGUST, 2021 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) ⁶ :	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) ¹⁶	Chemical Dosage ¹⁶ (mg/L)	Parameters Measured ¹⁷ , 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.		
	<input type="checkbox"/> Gallons <input checked="" type="checkbox"/> MG	Volume ¹⁷ (gal/day)	Weight ¹⁷ (lbs/day)	a. RAW Ph			b.	c.				
									DAILY AVG		<input type="checkbox"/> G <input type="checkbox"/> A	<input type="checkbox"/> G <input type="checkbox"/> A
1	2.7	144	1.483	22	6.90							
2	2.8	160	1.648	23	6.90							
3	2.8	124	1.277	18	7.05							
4	2.8	136	1.401	20	7.00							
5	2.8	155	1.597	23	7.05							
6	2.8	144	1.483	21	6.85							
7	2.8	134	1.380	20	6.90							
8	2.8	154	1.586	22	6.90							
9	2.8	156	1.607	23	6.80							
10	2.1	114	1.174	22	6.85							
11	2.8	118	1.215	17	6.90							
12	2.8	126	1.298	18	6.90							
13	2.8	140	1.442	20	7.00							
14	2.8	135	1.391	20	7.00							
15	2.8	112	1.154	16	6.90							
16	2.8	136	1.401	20	7.05							
17	2.8	110	1.133	16	7.05							
18	2.8	120	1.236	18	7.00							
19	2.8	133	1.370	20	7.05							
20	2.8	114	1.174	17	6.90							
21	2.7	126	1.298	19	6.95							
22	2.8	94	968	14	6.95							
23	2.8	103	1.061	15	7.10							
24	2.8	146	1.504	21	7.10							
25	2.8	132	1.360	19	7.15							
26	2.8	133	1.370	19	7.05							
27	2.8	130	1.339	19	7.00							
28	2.8	180	1.854	26	6.95							
29	2.8	146	1.504	21	7.05							
30	2.8	147	1.514	21	7.00							
31	2.8	125	1.258	18	7.05							

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

¹⁸Describe 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 Water Daily Average Test Kit

b. *William Cookerly* 9-1-2021

c. *William Cookerly* Chief Plant 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:



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 :	424001-01T	Reporting Period ³ :	AUGUST 2021 Month Year

II. Chemical & Operational Information

Chemical Name ⁴ :	CHLORINE	Purchased Strength ⁶ :	1.0	Target Range/min ¹² :	0.20	
Manufacturer ⁵ :	AXIAX, LLC	Purchased Density (lbs/gal) ⁹ :	12.3	Target Dose ¹³ :	NA	
Product Name ⁷ :	CHLORINE	Dilution Factor or Mix Ratio ¹⁰ :	NA	Alarm Setting (low) ¹⁴ :	1.0	
Reason for Adding Chemical ⁸ :	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 <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) Grab or Continuous (A) Analyzer 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)			Chemical Dosage ¹⁹ (mg/L)	a. FREE CL ₂ FINISHED DAILY AVG			c.
							<input type="checkbox"/> G <input type="checkbox"/> A	<input type="checkbox"/> G <input type="checkbox"/> A		
1	2.7		97	4.3	2.19	1.77				
2	2.8		96	4.1	2.22	2.01				
3	2.8		105	4.5	2.10	1.82				
4	2.8		94	4.0	2.11	1.99				
5	2.8		94	4.0	2.13	1.85				
6	2.8		84	3.6	2.17	2.06				
7	2.8		97	4.2	2.15	1.96				
8	2.8		86	3.7	2.14	1.87				
9	2.8		97	4.2	2.12	2.00				
10	2.1		51	2.9	2.11	1.90				
11	2.8		83	3.8	2.13	1.80				
12	2.8		104	4.5	2.09	1.79				
13	2.8		124	5.3	2.08	1.79				
14	2.8		99	4.2	2.09	1.88				
15	2.8		100	4.3	2.13	1.94				
16	2.8		99	4.2	2.14	1.95				
17	2.8		99	4.2	2.09	1.83				
18	2.8		102	4.4	2.08	1.71				
19	2.8		101	4.3	2.10	1.84				
20	2.8		99	4.2	2.12	1.68				
21	2.7		100	4.4	2.23	1.94				
22	2.8		94	4.0	2.05	1.68				
23	2.8		93	4.0	2.13	1.82				
24	2.8		90	3.9	2.20	1.94				
25	2.8		90	3.9	2.24	2.01				
26	2.8		94	4.0	2.23	2.03				
27	2.8		93	4.0	2.28	2.09				
28	2.8		95	4.1	2.32	2.11				
29	2.8		97	4.2	2.24	1.99				
30	2.8		92	4.0	2.23	1.88				
31	2.8		97	4.2	2.26	2.17				

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 Maximum Free Chlorine, Finished Water, Grab Sample Test Kit
 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: *William Cooksey* Date²⁴: 9-1-2021
 Print Name: William Cooksey Title: Chief Plant 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's 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 :	AUGUST 2021 Month Year

II. Chemical & Operational Information

Chemical Name ³ :	CALCIUM HYDROXIDE	Purchased Strength ³ :	0.85	Target Range/min ¹² :	NA
Manufacturer ³ :	CARMEUSE LIME & STONE	Purchased Density (lbs/gal) ³ :	18.7	Target Dose ¹³ :	NA
Product Name ³ :	HYDRATED LIME	Dilution Factor or Mix Ratio ¹⁰ :	NA	Alarm Setting (low) ¹⁴ :	NA
Reason for Adding Chemical ⁴ :	PH ADJUSTMENT	NSF Approved (Y/N) ¹¹ :	Y	Alarm Setting (high) ¹⁴ :	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 ¹⁶		Measured Chemical Used		Calculated Chemical Used (lbs) ¹⁸	Chemical Dosage ¹⁹ (mg/l)	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)	Chemical Dosage ¹⁹ (mg/l)			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		2.7		100		4.4	7.10			
2		2.6		100		4.6	7.05			
3		2.7		100		4.4	6.95			
4		2.7		100		4.4	6.90			
5		2.6		100		4.6	6.90			
6		2.6		100		4.6	6.95			
7		2.8		100		4.3	7.05			
8		2.8		100		4.3	7.00			
9		2.7		100		4.4	7.10			
10		1.8		75		5.0	6.95			
11		2.6		100		4.6	7.00			
12		2.6		100		4.6	7.05			
13		2.7		100		4.4	7.10			
14		2.7		100		4.4	7.10			
15		2.7		100		4.4	6.90			
16		2.7		100		4.4	7.05			
17		2.7		100		4.4	7.10			
18		2.7		100		4.4	7.00			
19		2.6		100		4.6	7.00			
20		2.5		100		4.8	7.05			
21		2.5		100		4.8	6.95			
22		2.5		100		4.8	6.90			
23		2.5		100		4.8	7.05			
24		2.6		100		4.6	7.00			
25		2.5		100		4.8	6.90			
26		2.5		100		4.8	6.95			
27		2.6		100		4.6	7.05			
28		2.6		100		4.6	7.05			
29		2.6		100		4.6	7.15			
30		2.6		100		4.6	7.05			
31		2.6		100		4.6	7.00			

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.)²⁶:

a. Finished Water 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 Coakley 9-1-2021
 Print Name: William Coakley Title: Plant 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 :	AUGUST 2021 Month Year

II. Chemical & Operational Information

Chemical Name ⁴ :	SODIUM BISULFATE	Purchased Strength ⁵ :	10-15	Target Range/min ¹² :	NA
Manufacturer ⁶ :	CARUS CORPORATION	Purchased Density (lbs/gal) ⁹ :	12.03	Target Dose ¹³ :	NA
Product Name ⁶ :	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 ¹⁶ <input type="checkbox"/> Gallons <input checked="" type="checkbox"/> MG	Measured Chemical Used		Calculated Chemical Used (lbs) ¹⁸	Chemical Dosage ¹⁶ (mg/L)	Parameters Measured ¹⁷ , 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. <u>Finished Ph</u> <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	2.7		50		2.2	7.10			
2	2.6		50		2.3	7.05			
3	2.7		50		2.2	6.95			
4	2.7		50		2.2	6.90			
5	2.6		50		2.3	6.90			
6	2.6		50		2.3	6.95			
7	2.8		50		2.1	7.05			
8	2.8		50		2.1	7.00			
9	2.7		50		2.2	7.10			
10	1.8		35		2.3	6.95			
11	2.6		50		2.3	7.00			
12	2.6		50		2.3	7.05			
13	2.7		50		2.2	7.10			
14	2.7		50		2.2	7.10			
15	2.7		50		2.2	6.90			
16	2.7		50		2.2	7.05			
17	2.7		50		2.2	7.10			
18	2.7		50		2.2	7.00			
19	2.6		50		2.3	7.00			
20	2.5		50		2.4	7.05			
21	2.5		50		2.4	6.95			
22	2.5		50		2.4	6.90			
23	2.5		50		2.4	7.05			
24	2.6		50		2.3	7.00			
25	2.5		50		2.4	6.90			
26	2.5		50		2.4	6.95			
27	2.6		50		2.3	7.05			
28	2.6		50		2.3	7.05			
29	2.6		50		2.3	7.15			
30	2.6		50		2.3	7.05			
31	2.6		50		2.3	7.00			
Total					Indicate total # of days the residual was off-target for the month (from Section II) Monthly Target Summary ²³ :				

*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 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 Coakley 9-1-2021
 Print Name: William Coakley Title: Chief Operator



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>015/10300</u>	<u>RAW WATER/COMBINED FILTER EFFLUENT</u>	<u>8-2-2021</u>	<u>William Cooley</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
<u>9-20</u>	<u>1</u>	<u>35</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.00</u>
<u>10-20</u>	<u>1</u>	<u>33</u>	<u>35</u>	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<u>TWSUVA</u>	<u>1.00</u>
<u>11-20</u>	<u>1</u>	<u>32</u>	<u>35</u>	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<u>TWSUVA</u>	<u>1.00</u>
<u>12-20</u>	<u>1</u>	<u>42</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.20</u>
<u>1-21</u>	<u>1</u>	<u>43</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.23</u>
<u>2-21</u>	<u>1</u>	<u>38</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.09</u>
<u>3-21</u>	<u>1</u>	<u>38</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.09</u>
<u>4-21</u>	<u>1</u>	<u>35</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.00</u>
<u>5-21</u>	<u>1</u>	<u>42</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.20</u>
<u>6-21</u>	<u>1</u>	<u>38</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.09</u>
<u>7-21</u>	<u>1</u>	<u>42</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.20</u>
<u>8-21</u>	<u>1</u>	<u>46</u>	<u>35</u>	<input type="checkbox"/> YES <input type="checkbox"/> NO		<u>1.31</u>
Sum of Past 12 Months:						<u>13.41</u>
Compliance Value (Sum of Past 12 Months/ 12):						<u>1.12</u>

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

PWS Authorized Signature: William CooleyDate: 9-15-2021

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 = $(\text{Average of Set 1} + \text{Average of Set 2}) \div 2$).

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 source 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.

⁴ For 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

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 <input checked="" type="checkbox"/> NTNC <input type="checkbox"/> TNC <input type="checkbox"/>

DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information	Date Collected		Collected By		
			Date	Time			
A 01S	Great Pond WTP - Raw Water	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input checked="" type="checkbox"/> (R)aw <input type="checkbox"/> (F)inished	08/02/2021	10:30	Paul Hennessy	
B 10300	Combined Filter Effluent	<input type="checkbox"/> (M)ultiple <input checked="" type="checkbox"/> (S)ingle	<input type="checkbox"/> (R)aw <input checked="" type="checkbox"/> (F)inished	08/02/2021	10:30	Bill Cookerly	
Routine or Special Sample		Original, Resubmitted or Confirmation Report				If Resubmitted Report, list below:	
						(1) Reason for Resubmission	
						(2) Collection Date of Original Sample	
A	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction				
B	<input checked="" type="checkbox"/> RS <input type="checkbox"/> SS	<input checked="" type="checkbox"/> Original <input type="checkbox"/> Resubmitted <input type="checkbox"/> Confirmation	<input type="checkbox"/> Resample <input type="checkbox"/> Reanalysis <input type="checkbox"/> Report Correction				
SAMPLE NOTES -- (Such as, if a Manifold/Multiple sample, list any sources that were on-line during sample collection).							
A							
B							

II. ANALYTICAL LABORATORY INFORMATION:

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

TOC Analyzed by (check one): <input type="checkbox"/> PWS or <input checked="" type="checkbox"/> Lab		Samples Acidified? <input checked="" type="checkbox"/> Yes or <input type="checkbox"/> No					
TOC Result (mg/L)	MDL (mg/L)	Lab Method	Date Analyzed	Analysis Lab MA Cert#	Analysis Lab Name	Lab Sample ID#	
A 5.69	0.500	5310B	08/03/2021	M-RI002	ESS Laboratory	A1H0040-01	
B 3.07	0.500	5310B	08/03/2021	M-RI002	ESS Laboratory	A1H0040-02	
<p>Surface or GWUDI systems \geq 500 persons.</p> <p>Monthly source (raw) water TOC sampling is required at each surface/GWUDI source to qualify for and remain on reduced THM/HAA5 monitoring. Each source must maintain a running annual average source (raw) water TOC level of \leq 4.0 mg/L (calculated quarterly). TOC analysis does not require the use of a Massachusetts or EPA certified laboratory.</p> <p>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 of normal operating conditions and influent water quality.</p>							

Alkalinity Analyzed by (check one): <input type="checkbox"/> PWS or <input checked="" type="checkbox"/> Lab							
Alkalinity Result (mg/L as CaCO3)	MDL (mg/L)	Lab Method	Date Analyzed	Analysis Lab MA Cert#	Analysis Lab Name	Lab Sample ID#	
A 25.0	4.0	2320B	08/12/2021	M-MA022	Analytical Balance Corporation	A1H0040-01	
B							
<p>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.</p>							

LAB SAMPLE NOTES	
A	
B	

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: 8/23/2021

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.

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



CERTIFICATE OF ANALYSIS

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

Project Name: DOC SUVA
Work Order Number: A1H0055
Date Received: 08/02/2021

Sampled By: Paul Hennessy
Location: Raw Water

Date Sampled: 8/2/21 10:30
Matrix: Surface Water

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Det. Limit*	MCL/ Rec Limit#	Result
<i>Test Parameters</i>				LAB-ID#: <u>A1H0055-01</u>		
Dissolved Organic Carbon (Average)	5310B	8/3/2021	mg/L	0.500	---	5.47
SUVA	4153	8/3/2021	/100 ml	N/A	---	0.0211
UV 254	5910B	8/3/2021	abs/cm	0.002	---	0.115

Sampled By: Paul Hennessy
Location: Combined Filter Effluent

Date Sampled: 8/2/21 10:30
Matrix: Drinking Water

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Det. Limit*	MCL/ Rec Limit#	Result
<i>Test Parameters</i>				LAB-ID#: <u>A1H0055-02</u>		
Dissolved Organic Carbon (Average)	5310B	8/4/2021	mg/L	0.500	---	2.98
SUVA	4153	8/4/2021	/100 ml	N/A	---	0.0183
UV 254	5910B	8/3/2021	abs/cm	0.002	---	0.054

NA = Not Applicable
ND = Not Detected
< = Less Than
* = Detection Limit
Rec Limit# = Recommended Limit

Approved By: 

REVIEWED
By SLawler at 10:46 am, Aug 20, 2021



Massachusetts Department of Environmental Protection - Drinking Water Program

TURBIDITY - INDIVIDUAL FILTER MONITORING
For Conventional or Direct Filtered Systems

SWTR
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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: Aug Year: 2021
Total # of Filters at Treatment Plant: 8

II. MONTHLY REPORTING

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

Table with 7 rows of monitoring questions and their corresponding 'Yes' or 'No' answers. Questions cover continuous monitoring, measurement frequency, equipment failures, and turbidity exceedances.

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

SWTR
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(Page 2 of 2)

III. DAILY REPORTING

Day	Filter Number 1		Filter Number 2		Filter Number 3		Filter Number 4	
	Max Day NTU	Max after 4 Hours NTU	Max Day NTU	Max after 4 Hours NTU	Max Day NTU	Max after 4 Hours NTU	Max Day NTU	Max after 4 Hours NTU
1	0.123616	0.106274	0.131220	0.097040	0.044967	0.204469	0.064288	0.221963
2	0.097703	0.102412	0.079602	0.091042	0.129455	0.156674	0.139510	0.150367
3	0.035219	0.143219	0.038514	0.148416	0.170694		0.060015	
4	0.068172		0.054752		0.177515	0.177174	0.107649	0.096772
5	0.084563	0.178495	0.053730	0.171551	0.197626	0.132888	0.109282	0.089089
6	0.081514	0.093455	0.035062	0.102482	0.137801	0.085768	0.057352	0.089241
7	0.107055	0.090994	0.133018	0.143895	0.127116		0.151935	
8	0.279970		0.195628		0.130120	0.121995	0.228942	0.222297
9	0.228177	0.128193	0.112129	0.085615	0.177189	0.200663	0.202048	0.158522
10	0.037637	0.074621	0.056446	0.073716	0.172132	0.093879	0.122827	0.091182
11	0.090516	0.097881	0.060544		0.068471		0.094835	
12	0.064392		0.048183	0.205094	0.046490	0.165659	0.110898	0.119323
13	0.048752	0.094820	0.057109	0.083323	0.093521	0.083149	0.115605	0.104686
14	0.048854	0.129975	0.042646	0.090068	0.043711	0.111530	0.059994	
15	0.081748	0.093194	0.047673		0.049328		0.097988	0.095054
16	0.059355		0.081648	0.091170	0.082030	0.091624	0.060623	0.109286
17	0.083363	0.082628	0.048447	0.103469	0.079731	0.084890	0.059059	0.150073
18	0.051485	0.106585	0.084246	0.070028	0.079391	0.082326	0.064800	
19	0.077903	0.091993	0.044551		0.045682		0.054198	0.090526
20	0.056493		0.068536	0.072624	0.098138	0.098138	0.078712	0.105583
21	0.050268	0.103188	0.073808	0.070972	0.098141	0.104551	0.061862	0.104695
22	0.059847	0.094384	0.044165	0.083610	0.060904	0.089123	0.064451	
23	0.062723	0.082407	0.051716		0.054158		0.090606	0.101412
24	0.052354		0.052814	0.068465	0.070295	0.070295	0.063360	0.096294
25	0.064412	0.069605	0.052370	0.075136	0.062190	0.068185	0.046821	0.078820
26	0.071643	0.093316	0.033285	0.074086	0.033668	0.075336	0.049922	
27	0.119419	0.092767	0.039812		0.040112		0.084299	0.094346
28	0.046919		0.031600	0.076397	0.089803	0.089630	0.047251	0.120591
29	0.044984	0.105344	0.035594	0.103146	0.035592	0.108505	0.195698	0.110078
30	0.044897	0.124715	0.032412	0.126036	0.048708	0.066880	0.057641	
31	0.045636	0.099914	0.039514		0.043842		0.071678	0.089139

- 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 Cookley
Chief Plant Operator

Date: 9/4/2021

Title:

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
J

(Page 2 of 2)

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	0.053861	0.129718	0.102696	0.149178	0.056238		0.073723	
2	0.045832		0.076655		0.130021	0.102707	0.068259	0.154857
3	0.105754	0.084691	0.061549	0.103479	0.052049	0.095638	0.084639	0.108653
4	0.094332	0.091490	0.069869	0.090396	0.046074	0.105121	0.066252	0.118725
5	0.031862	0.122705	0.088894	0.090230	0.052746		0.072020	
6	0.037009		0.065036		0.039251	0.086300	0.079190	0.115455
7	0.038318	0.080986	0.072226	0.077180	0.068543	0.077126	0.180590	0.161947
8	0.083516	0.124785	0.239163	0.131415	0.101705	0.107065	0.209117	0.215774
9	0.088368	0.109211	0.248892	0.105141	0.045959		0.076916	
10	0.042626		0.050612		0.057813	0.088372	0.089379	0.108915
11	0.142133	0.122950	0.049377	0.096557	0.051130	0.103460	0.110265	0.116862
12	0.049451	0.089711	0.056863	0.079343	0.049734	0.086713	0.086793	
13	0.091162	0.086046	0.048438		0.064106		0.069579	0.103919
14	0.050521		0.091866	0.082633	0.052365	0.104969	0.073555	0.121102
15	0.088160	0.077306	0.046684	0.102080	0.135599	0.109211	0.075383	0.117898
16	0.084272	0.097433	0.050044	0.139453	0.056436	0.098042	0.084164	
17	0.047595	0.090474	0.057844		0.072186		0.080250	0.109015
18	0.063638		0.083302	0.083494	0.057961	0.103458	0.081333	0.128695
19	0.044236	0.089696	0.053698	0.089353	0.054577	0.110084	0.079471	0.126026
20	0.078370	0.092862	0.058747	0.082394	0.093309	0.112905	0.086736	
21	0.070292	0.102525	0.062146		0.075288		0.083686	0.129675
22	0.056387		0.070325	0.082558	0.059002	0.121324	0.122860	0.140024
23	0.045687	0.093486	0.041926	0.087746	0.049170	0.102712	0.079402	0.110252
24	0.061728	0.080947	0.040538	0.076630	0.076163	0.090913	0.074998	
25	0.032184	0.082134	0.037891		0.054013		0.063895	0.095992
26	0.039756		0.033827	0.057329	0.045493	0.080073	0.066909	0.111157
27	0.040093	0.086714	0.040488	0.085073	0.079395	0.096442	0.068616	0.126634
28	0.140053	0.096955	0.041500	0.086108	0.050190	0.108565	0.072731	
29	0.040154	0.124417	0.040336		0.056082		0.070858	0.132824
30	0.046521		0.038900	0.078621	0.051449	0.099691	0.074875	0.126244
31	0.057908	0.078066	0.051572	0.073234	0.081594	0.098805	0.124628	0.137217

- 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 Cookerly*
 Date: 9/4/2021 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
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 Sample Type ^{1,4}	DEP Location Code # ¹	DEP APPROVED SAMPLE SITE INFORMATION ¹		CHLORINE RESULT ² (mg/L)	COLLECTION AND ANALYSIS ³ :		COLLECTED AND ANALYZED BY:
		DEP Approved	SAMPLE LOCATION ¹		DATE	TIME	
RS	001	TOWN HALL		1.03	8/2/2021	06:08	T. Duggan
RS	004	COTTAGE VARIETY		1.24	8/2/2021	08:30	T. Duggan
RS	008E	STEWARTS POWER EQUIPMENT		.02	8/2/2021	07:50	T. Duggan
RS	006	COMMUNITY CENTER		.16	8/2/2021	07:25	T. Duggan
RS	001	TOWN HALL		1.10	8/9/2021	06:15	T. Duggan
RS	004	COTTAGE VARIETY		1.20	8/9/2021	07:20	T. Duggan
RS	008E	STEWARTS POWER EQUIPMENT		.05	8/9/2021	08:00	T. Duggan
RS	006	COMMUNITY CENTER		.11	8/9/2021	06:50	T. Duggan
RS	001	TOWN HALL		0.86	8/16/2021	06:20	J. MacLaine
RS	004	COTTAGE VARIETY		0.74	8/16/2021	07:00	J. MacLaine
RS	008E	STEWARTS POWER EQUIPMENT		0.04	8/16/2021	08:00	J. MacLaine
RS	006	COMMUNITY CENTER		.002	8/16/2021	07:30	J. MacLaine
RS	001	TOWN HALL		.80	8/23/2021	06:20	J. MacLaine
RS	004	COTTAGE VARIETY		.082	8/23/2021	06:45	J. MacLaine
RS	008E	STEWARTS POWER EQUIPMENT		.02	8/23/2021	08:15	J. MacLaine
RS	006	COMMUNITY CENTER		.002	8/23/2021	07:10	J. MacLaine
RS	001	TOWN HALL		1.34	8/30/2021	06:09	T. Duggan
RS	004	COTTAGE VARIETY		1.23	8/30/2021	07:25	T. Duggan
RS	008E	STEWARTS POWER EQUIPMENT		.01	8/30/2021	08:00	T. Duggan
RS	006	COMMUNITY CENTER		.03	8/30/2021	07:00	T. Duggan

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 Month⁵: **70** Average Chlorine Result of All Samples For Month⁵ (mg/L): **0.94**

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: *William Carthy* 9-15-2021

DEP Review Status: Accepted Disapproved Review Comments:



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

CI

I. PWS INFORMATION:

PWS ID #: 4244000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH Class: COM NTNC TNC
 II. ANALYTICAL INFORMATION: Refer to your Mass/DEP 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: Weekly samples taken in the distribution system

DEP APPROVED SAMPLE SITE INFORMATION ¹		CHLORINE RESULT ² (mg/L)	COLLECTION AND ANALYSIS ³		COLLECTED AND ANALYZED BY:
DEP Sample Type ⁴	DEP Approved SAMPLE LOCATION ¹		DATE	TIME	
RS	TOWER HILL SCHOOL - ADAMS STREET	1.54	8/2/21	10:46 AM	A. PIERRE-LOUIS
RS	JFK SCHOOL - 20 HURLEY DRIVE	1.47		8:15 AM	
RS	MARTIN E. YOUNG SCHOOL - COURTNEY DRIVE	1.06		9:30 AM	
RS	COMFORT INN - 1374 NORTH MAIN STREET	1.89		11:30 AM	
RS	COMMUNITY MIDDLE SCHOOL - HIGH STREET	1.94		11:15 AM	
RS	MOBIL STATION - 93 MAZZEO DRIVE	1.37		9:45 AM	
RS	7-11 FOOD SHOP - 675 NORTH STREET	.41		8:45 AM	
RS	ENTERPRISE - 249 NORTH MAIN STREET	NO ACCESS DUE TO		COULD NOT	
OHAE	APP AUTO 217 NORTH MAIN STREET	1.63		9:45 AM	
RS	OAK GROVE STANDPIPE	.78		10:15 AM	
RS	SOUTH MAIN STREET STANDPIPE	.68		9:00 AM	

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: 70 Average Chlorine Result of All Samples For Month⁶ (mg/L): 0.94
 In accordance with 310 CMR 22.15(2), if mailing paper reports, TWO copies of this report must be received by your Mass/DEP 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.
 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: William Corbett 9-15-2021
 DEP Review Status: Accepted Disapproved Review Comments:



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

CI

I. PWS INFORMATION:

PWS ID #: 424-4000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH 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 4600-Cl: D E F G H I ASTM D1253-86
 Notes: Weekly samples taken in the distribution system

DEP Sample Type	DEP Location Code #	DEP Approved Sample Location ¹	CHLORINE RESULT ² (mg/L)	COLLECTION AND ANALYSIS ³ :		COLLECTED AND ANALYZED BY:
				DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	1.31	8/11/21	10:00AM	APERRÉ-LOVES
RS	004	JFK SCHOOL - 20 HURLEY DRIVE	1.06		8:15AM	
RS	005	MARTIN E. YOUNG SCHOOL - COURTNEY DRIVE	.54		9:00AM	
RS	006	COMFORT INN - 1374 NORTH MAIN STREET	1.89		11:00AM	
RS	008	COMMUNITY MIDDLE SCHOOL - HIGH STREET	1.26		10:30AM	
RS	011	MOBIL STATION - 93 MAZZEO DRIVE	.81		9:30AM	
RS	012	7-11 FOOD SHOP - 675 NORTH STREET	.77		7:45AM	
RS	014 A	ENTERPRISE - 249 NORTH MAI STREET	NO ACCESS	DNR TO	COVID - 19	
RS	016	ONE ARR AVE - 317 NORTH MAI STREET OAK GROVE STANDPIPE	1.43		7:15AM	
RS	017	SOUTH MAIN STREET STANDPIPE	.50		9:45AM	
					8:30AM	

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 Month⁵: 70 Average Chlorine Result of All Samples For Month⁵ (mg/L): 0.94
 in accordance with 910 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.
 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] 9-15-2021
 DEP Review Status: Accepted Disapproved Review Comments:



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

CJ

I. PWS INFORMATION:

PWS ID #: 4244000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH 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 D1263-86
 Notes: Weekly samples taken in the distribution system

DEP Sample Type ¹	DEP Location Code # ¹	DEP Approved Sample Location ¹	CHLORINE RESULT ² (mg/L)	COLLECTION AND ANALYSIS ³		COLLECTED AND ANALYZED BY:
				DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	1.42	8-16-21	10:15 AM	A. PIERRE-LOUIS
RS	004	JFK SCHOOL - 20 HURLEY DRIVE	1.33		8:45 AM	
RS	005	MARTIN E. YOUNG SCHOOL - COURTNEY DRIVE	.90		9:15 AM	
RS	006	COMFORT INN - 1374 NORTH MAIN STREET	1.79		11:15 AM	
RS	008	COMMUNITY MIDDLE SCHOOL - HIGH STREET	1.52		10:45 AM	
RS	011	MOBIL STATION - 93 MAZZEO DRIVE	1.14		9:45 AM	
RS	012	7-11 FOOD SHOP - 675 NORTH STREET	.31		8:15 AM	
RS	014 A	ENTERPRISE - 249 NORTH MAI STREET	NO ACCESS	DUE TO	COVERED	
RS	016	APX AND - 317 NORTH MAIN ST OAK GROVE STANDPIPE	1.49		11:45 AM	
RS	017	SOUTH MAIN STREET STANDPIPE	.63		10:00 AM	

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 Month⁵: 70 Average Chlorine Result of All Samples For Month⁵ (mg/L): 0.94
 In accordance with 310 CMR 23.15(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.
 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: William Corbett 9-15-2021

DEP Review Status: Accepted Disapproved Review Comments:



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

CI

I. PWS INFORMATION:

PWS ID #: 4244000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH Class: COM NTNC TNC
 II. ANALYTICAL INFORMATION: Refer to your MassDEP Coliform 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 D1253-86
 Notes: Weekly samples taken in the distribution system

DEP Sample Type ^{1,4}	DEP Location Code # ¹	DEP Approved Sample Location ¹	CHLORINE RESULT ² (mg/L)	COLLECTION AND ANALYSIS ³		COLLECTED AND ANALYZED BY:
				DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	1.31	8/23/21	10:15 AM	A. PIERRE-LOUIS
RS	004	JFK SCHOOL - 20 HURLEY DRIVE	1.21		8:30 AM	
RS	005	MARTIN E. YOUNG SCHOOL - COURTNEY DRIVE	0.89		9:00 AM	
RS	006	COMFORT INN - 1374 NORTH MAIN STREET	1.73		11:15 AM	
RS	008	COMMUNITY MIDDLE SCHOOL - HIGH STREET	1.39		10:45 AM	
RS	011	MOBIL STATION - 93 MAZZEO DRIVE	1.07		9:30 AM	
RS	012	7-11 FOOD SHOP - 675 NORTH STREET	0.36		8:00 AM	
RS	014 A	ENTERPRISE - 249 NORTH MAI STREET				
RS	014 B	AXP AUTO - 317 NORTH MAIN ST.				
RS	014 C	OAK GROVE STANDPIPE				
RS	017	SOUTH MAIN STREET STANDPIPE				

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).
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III. COMPLIANCE REPORTING: Total # of Samples Collected for Month⁵: 70 Average Chlorine Result of All Samples For Month⁶ (mg/L): 0.94
 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.
 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] 9-15-2021
 DEP Review Status: Accepted Disapproved Review Comments:



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

CI

I. PWS INFORMATION:

PWS ID #: **4244000** PWS Name: **RANDOLPH WATER DEPARTMENT** City/Town: **RANDOLPH** Class: COM NTNC TMC
 II. ANALYTICAL INFORMATION: Refer to your MassDEP Coliform 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 D1253-86
 Notes: Weekly samples taken in the distribution system

DEP APPROVED SAMPLE SITE INFORMATION ¹		CHLORINE RESULT ² (mg/L)	COLLECTION AND ANALYSIS ³		COLLECTED AND ANALYZED BY:
DEP Sample Type ⁴	DEP Location Code ⁵		DEP Approved SAMPLE LOCATION ⁶	DATE	
RS	003	1.51	TOWER HILL SCHOOL - ADAMS STREET	8/30/21	10:15AM
RS	004	1.37	JFK SCHOOL - 20 HURLEY DRIVE		8:45AM
RS	005	0.51	MARTIN E. YOUNG SCHOOL - COURTNEY DRIVE		9:15AM
RS	006	1.71	COMFORT INN - 1374 NORTH MAIN STREET		11:15AM
RS	008	1.48	COMMUNITY MIDDLE SCHOOL - HIGH STREET		10:45AM
RS	011	1.22	MOBIL STATION - 93 MAZZEO DRIVE		9:45AM
RS	012	0.53	7-11 FOOD SHOP - 675 NORTH STREET		8:15AM
RS	014 A	NO ACCESS DUE	ENTERPRISE - 249 NORTH MAI STREET	TO	COVID-19
RS	014E	1.67	AKP AUTO - 317 NORTH MAIN ST.	"	7:45AM
RS		0.71	OAK GROVE STANDPIPE		10:00AM
RS		0.87	SOUTH MAIN STREET STANDPIPE		9:00AM

¹ DEP Sample Type, Location Code⁵, 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: **70** Average Chlorine Result of All Samples For Month⁶ (mg/L): **0.97**
 in accordance with 310 CMR 22.15(2), if mailing paper reports, TWVO 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.
 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]* 9-15-2021
 DEP Review Status: Accepted Disapproved Review Comments:



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): 2021 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>		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 <input type="checkbox"/> No <input checked="" type="checkbox"/>		Running Annual Average:	µg/L

C. Chlorine/Chloramines

Total Number of Samples:	Month 1: <u>66</u> <u>JULY</u>	Monthly Averages: (report all 3 months per quarter)	<u>1.17</u> mg/L	Quarterly Average:	<u>1.06</u> mg/L
	Month 2: <u>70</u> <u>AUG</u>		<u>0.94</u> mg/L		
	Month 3: <u>SEPT</u>		mg/L		
Was the Running Annual Average MRDL (4.0 mg/L) exceeded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Running Annual Average:	<u>1.17</u> 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:	Month 1:	Monthly Averages: (report all 3 months per quarter)	mg/L	Quarterly Average:	mg/L
	Month 2:		mg/L		
	Month 3:		mg/L		
Was the (4.0 mg/L) threshold exceeded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Running Annual Average:	mg/L

III. FOR SYSTEMS USING OZONATION - Attach additional sheet(s) to report more than 1 plant.

E. Bromate (treated) Plant Name: _____

Total Number of Samples:	Month 1:	Monthly Averages: (report all 3 months per quarter)	mg/L	Quarterly Average:	mg/L
	Month 2:		mg/L		
	Month 3:		mg/L		
Was the Running Annual Average MCL (0.010 ug/l) exceeded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Running Annual Average:	mg/L

F. Bromide (raw) Plant Name: _____
 Required for systems seeking or approved to reduce Bromate monitoring

Total Number of Samples:	Month 1:	Monthly Averages: (report all 3 months per quarter)	mg/L	Quarterly Average:	mg/L
	Month 2:		mg/L		
	Month 3:		mg/L		
Was the (0.05 mg/l) threshold exceeded? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				Running Annual Average:	mg/L

IV. FOR SYSTEMS USING CHLORINE DIOXIDE - Report compliance information on your Chlorine/Chlorine Dioxide (Daily Samples) report.

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: [Signature] Date: 9-15-2021

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 <MBL 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)	Review Comments
<input type="checkbox"/> Accepted <input type="checkbox"/> Disapproved	

9/10/21 open shift 12a - 8a, KP worked overtime
9/11/21 open shift 8a - 4p, BC worked overtime
9/12/21 open shift 8a - 4p, PK worked overtime
9/13/21 open shift 4p - 12a, BC and KP split overtime
9/14/21 open shift 4p - 12a, BC and KP split overtime
9/15/21 PK vacation 4p - 12a, BC and KP split overtime
9/16/21 open shift 12a - 8a, KP worked overtime, plus stayed an hour to assist Jack applying for a license.
9/16/21 PK vacation 4p - 12a, BC worked overtime

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Regular pay rate Hours	Overtime Hours	Double Time Hours	Holiday Pay
Plant Manager	VAC	0	0								
Paul Hennessy											
Chief Operator	8:00 AM 4:00 PM	OFF	OFF	OFF	OFF	OFF	OFF	40	25	3	
William Cookerly											
Operator	4:00 PM 12:00 AM										
Paul Kardasz											
Operator	8:00 AM 4:00 PM	OFF	OFF	OFF	OFF	OFF	OFF	40	0		
John Lynch											
Operator	OFF	OFF	12:00 AM 8:00 AM								
Kevin Patten											
Operator IT	8:00 AM 4:00 PM	OFF	OFF	OFF	OFF	OFF	OFF	40	25	4	
Myrna Figueroa											
								40	0		