RANDOLPH-HOLBROOK
JOINT WATER BOARD

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

50 North Franklin Street
Holbrook, MA 02343

Town of Randolph

April 15, 2023

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, 2023 Randolph/Holbrook
Joint Water System, PWS #424001

Gentlemen:

Enclosed please find all reports as referenced above for the month of March, 2023. Should there be any questions, please do not hesitate to call me.

Sincerely,

William Platt
Treatment Plant Operator, Third Class

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

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: March Year: 2023

SWTR REPORTING

Filtered Water Turbidity Measured: (check only one) ☐ Combined Filter Effluent ☐ Individual Filter Effluent[1] ☐ Clearwell ☐ Plant Effluent

Filtration Technology:

☐ Conventional ☐ Direct ☐ Alternative	Monthly Turbidity (95%) NTU Limit = 0.3	Max Day Turbidity NTU Limit = 1
☐ Slow Sand ☐ Diatomaceous Earth	Monthly Turbidity (95%) NTU Limit = 1	Max Day Turbidity NTU Limit = 5

Day	Max Filtered Water Turbidity Result (NTU)	Number of Turbidity Measurements[2]	Number of Turbidity Measurements Monthly (95%) NTU Limit[3]	Number of Turbidity Measurements Max Day NTU Limit[4]
1	0.03	6	6	0
2	0.03	6	6	0
3	0.03	6	6	0
4	0.03	6	6	0
5	0.03	6	6	0
6	0.03	6	6	0
7	0.03	6	6	0
8	0.03	6	6	0
9	0.03	6	6	0
10	0.03	6	6	0
11	0.03	6	6	0
12	0.03	6	6	0
13	0.03	6	6	0
14	0.03	6	6	0
15	0.03	6	6	0
16	0.03	6	6	0
17	0.03	6	6	0
18	0.04	6	6	0
19	0.03	6	6	0
20	0.03	6	6	0
21	0.03	6	6	0
22	0.03	6	6	0
23	0.03	6	6	0
24	0.03	6	6	0
25	0.03	6	6	0
26	0.03	6	6	0
27	0.03	6	6	0
28	0.03	6	6	0
29	0.03	6	6	0
30	0.03	6	6	0
31	0.02	6	6	0
Totals		186 A	186 B	% Turbidity Meeting 95% Limit: B/A x 100 % = X (Enter on SWTR - Form G)

[1] May be used by systems serving less than 10,000 persons, subject to DEP approval.

[2] 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.

[3] 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.

[4] If at any at 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

I declare under the penalties of law that I am the person authorized to act for the system and that the information contained herein is true, accurate and complete to the best of my knowledge.

PWS Authorized Signature: [signature] Date: 2/13/23 Title: Chief Plant Operator

Submit to your [illegible] DEP [illegible] Office

Massachusetts Department of Environmental Protection - Drinking Water Program

Compliance Determination for Filtered Systems - Monthly Report

SWTR G

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: 2023

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).

186	= A	Total # of filtered water turbidity measurements for month (SWTR – Form F)
186	= B	Total # of filtered water turbidity measurements less than or equal to the specified limits for the filtration technology used. (SWTR – Form F)
100	= (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	Day	Cl_2 mg/l	Day	Cl_2 mg/l	Day	Cl_2 mg/l	Day	Cl_2 mg/l	Day	Cl_2 mg/l
1	2.05	6	1.68	11	1.82	16	2.16	21	2.12	26	2.07	31	2.10
2	1.97	7	1.78	12	1.64	17	2.14	22	2.23	27	2.06		
3	1.99	8	1.87	13	2.04	18	2.06	23	2.18	28	2.17		
4	2.03	9	1.94	14	2.12	19	2.03	24	2.11	29	2.15		
5	2.01	10	1.98	15	2.16	20	2.16	25	2.12	30	2.14		

Residual Free Cl_2 Measu

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: 61 # HPC sites > 500/mL: 0 # HPC sites ≤ 500/mL: 61

66	= 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)
0	= b	# of sites HPC samples were analyzed *instead* of Cl_2 residual measurements
0	= c	# of sites where no Cl_2 residual was detected and no HPC sample was analyzed
0	= d	# of sites where no Cl_2 residual was detected and HPC > 500 CFU/mL
0	= 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 fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

PWS Authorized Signature: [signature] Date: 4/13/23 Title: 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

Cl

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 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 Type[1,4]	DEP Location Code #[1]	DEP Approved SAMPLE LOCATION[1]		DATE	TIME	
RS	001	TOWN HALL	1.36	3/6/2023	07:30	J. Maclane
RS	004	COTTAGE VARIETY	1.62	3/6/2023	08:00	J. Maclane
RS	008E	STEWARTS POWER EQUIPMENT	.01	3/6/2023	09:35	J. Maclane
RS	006	COMMUNITY CENTER	1.25	3/6/2023	08:20	J. Maclane
RS	001	TOWN HALL	1.42	3/13/2023	07:30	J. Maclane
RS	004	COTTAGE VARIETY	1.58	3/13/2023	08:00	J. Maclane
RS	008E	STEWARTS POWER EQUIPMENT	.05	3/13/2023	08:45	J. Maclane
RS	006	COMMUNITY CENTER	.97	3/13/2023	07:45	J. Maclane
RS	001	TOWN HALL	1.70	3/20/2023	07:30	J. Maclane
RS	004	COTTAGE VARIETY	1.71	3/20/2023	08:10	J. Maclane
RS	008E	STEWARTS POWER EQUIPMENT	.02	3/20/2023	07:50	J. Maclane
RS	006	COMMUNITY CENTER	1.43	3/20/2023	07:50	J. Maclane
RS	001	TOWN HALL	1.70	3/27/2023	07:30	J. Maclane
RS	004	COTTAGE VARIETY	1.88	3/27/2023	08:00	J. Maclane
RS	005	243 PLYMOUTH ST	.87	3/27/2023	08:45	J. Maclane
RS	006	COMMUNITY CENTER	1.49	3/27/2023	07:45	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 Month[5]: 16 Average Chlorine Result of All Samples For Month[5] (mg/L): 1.19

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] 4/13/23

DEP Review Status:	☐ Accepted ☐ Disapproved	Review Comments:	

Massachusetts Department of Environmental Protection - Drinking Water Program

CHLORINE/CHLORAMINES - MONTHLY REPORT

Cl

I. PWS INFORMATION:

PWS ID #: 4244000 PWS Name: RANDOLPH WATER DEPARTMENT City/Town: RANDOLPH Class: COM ☒ NTNG ☐ 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 Type[1,4]	DEP Location Code #[1]	DEP Approved SAMPLE LOCATION[1]		DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	1.77	3/6/23	10:00 AM	A. PIERRE-LOUIS
RS	004	JFK SCHOOL - 20 HURLEY DRIVE	1.61		8:00 AM	
RS	005	MARTIN E. YOUNG - 30 LOU COURTNEY DRIVE	1.07		9:00 AM	
RS	006	COMFORT INN - 1374 NORTH MAIN STREET	1.90		11:00 AM	
RS	008	COMMUNITY MIDDLE SCHOOL - 225 HIGH ST	1.86		10:30AM	
RS	011	MOBIL STATION - 93 MAZZEO DRIVE	1.64		9:30AM	
RS	012	7 - 11 FOOD SHOP - 675 NORTH STREET	1.23		8:30 AM	
RS	014 AE	AXP AUTO - 317 NORTH MAIN ST	1.75		7:30 AM	
RS	016	OAK GROVE STANDPIPE	1.44		10:15AM	
RS	017	SOUTH MAIN STREET STANDPIPE	1.37	↓	9:15AM	↓

[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).
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III. COMPLIANCE REPORTING: Total # of Samples Collected for Month[5]: 50 Average Chlorine Result of All Samples For Month[5] (mg/L): 1.63

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] 4/13/23

DEP Review Status:	☐ Accepted ☐ Disapproved	Review Comments:	

Massachusetts Department of Environmental Protection - Drinking Water Program

Cl

CHLORINE/CHLORAMINES - MONTHLY REPORT

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 D1253-86 ☐

Notes:

DEP APPROVED SAMPLE SITE INFORMATION[1]			CHLORINE RESULT[2] (mg/L)	COLLECTION AND ANALYSIS[3]:		COLLECTED AND ANALYZED BY:
DEP Sample Type[1,4]	DEP Location Code #[1]	DEP Approved SAMPLE LOCATION[1]		DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	1.77	3/8/23	10:00AM	A. PIERRE-LOUIS
RS	004	JFK SCHOOL - 20 HURLEY DRIVE	1.54		8:00AM	
RS	005	MARTIN E. YOUNG - 30 LOU COURTNEY DRIVE	1.29		9:00AM	
RS	006	COMFORT INN - 1374 NORTH MAIN STREET	1.89		11:00AM	
RS	008	COMMUNITY MIDDLE SCHOOL - 225 HIGH ST	1.87		10:30	
RS	011	MOBIL STATION - 93 MAZZEO DRIVE	1.60		9:30AM	
RS	012	7 - 11 FOOD SHOP - 675 NORTH STREET	1.24		8:30AM	
RS	014 AE	AXP AUTO - 317 NORTH MAIN ST	1.76		7:30AM	
RS	016	OAK GROVE STANDPIPE	1.37		10:15AM	
RS	017	SOUTH MAIN STREET STANDPIPE	1.40	↓	9:15AM	↓

[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.
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III. COMPLIANCE REPORTING: Total # of Samples Collected for Month[5]: 50 Average Chlorine Result of All Samples For Month[5] (mg/L): 1.63

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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] 4/13/23

DEP Review Status:	☐ Accepted ☐ Disapproved	Review Comments:	

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Massachusetts Department of Environmental Protection - Drinking Water Program

Cl

CHLORINE/CHLORAMINES - MONTHLY REPORT

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 D1253-86 ☐

Notes:

DEP APPROVED SAMPLE SITE INFORMATION[1]			CHLORINE RESULT[2] (mg/L)	COLLECTION AND ANALYSIS[3]:		COLLECTED AND ANALYZED BY:
DEP Sample Type[1,4]	DEP Location Code #[1]	DEP Approved SAMPLE LOCATION[1]		DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	1.78	3-13-23	10:40 AM	JASON Peterson
RS	004	JFK SCHOOL - 20 HURLEY DRIVE	1.64		9:20 AM	
RS	005	MARTIN E. YOUNG - 30 LOU COURTNEY DRIVE	1.24		8:35 AM	
RS	006	COMFORT INN - 1374 NORTH MAIN STREET	1.94		11:30 AM	
RS	008	COMMUNITY MIDDLE SCHOOL - 225 HIGH ST	1.88		11:05 AM	
RS	011	MOBIL STATION - 93 MAZZEO DRIVE	1.46		9:50 AM	
RS	012	7 - 11 FOOD SHOP - 675 NORTH STREET	1.02		8:05 AM	
RS	014 AE	AXP AUTO - 317 NORTH MAIN ST	1.71		7:40 AM	
RS	016	OAK GROVE STANDPIPE	1.34		10:15 AM	
RS	017	SOUTH MAIN STREET STANDPIPE	1.20		8:50 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.
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[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 Month[5]: 50 Average Chlorine Result of All Samples For Month[6] (mg/L): 1.63

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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] 4/13/23

DEP Review Status:	☐ Accepted ☐ Disapproved	Review Comments:	

Massachusetts Department of Environmental Protection - Drinking Water Program

Cl

CHLORINE/CHLORAMINES - MONTHLY REPORT

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 D1253-86 ☐

Notes:

DEP APPROVED SAMPLE SITE INFORMATION[1]			CHLORINE RESULT[2] (mg/L)	COLLECTION AND ANALYSIS[3]:		COLLECTED AND ANALYZED BY:
DEP Sample Type[1,4]	DEP Location Code #[1]	DEP Approved SAMPLE LOCATION[1]		DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	1.92	3/20/23	10:00 Am	A. PIERRE-LOUIS
RS	004	JFK SCHOOL - 20 HURLEY DRIVE	1.67		8:00Am	
RS	005	MARTIN E. YOUNG - 30 LOU COURTNEY DRIVE	1.54		9:00AM	
RS	006	COMFORT INN - 1374 NORTH MAIN STREET	2.01		11:00 AM	
RS	008	COMMUNITY MIDDLE SCHOOL - 225 HIGH ST	1.98		10:30 Am	
RS	011	MOBIL STATION - 93 MAZZEO DRIVE	1.80		9:30Am	
RS	012	7 - 11 FOOD SHOP - 675 NORTH STREET	1.29		8:30Am	
RS	014 AE	AXP AUTO - 317 NORTH MAIN ST	1.85		9:30 Am	
RS	016	OAK GROVE STANDPIPE	1.50		10:15Am	
RS	017	SOUTH MAIN STREET STANDPIPE	1.30	↓	8:45PM	↓

[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.
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[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 Month[5]: 50 Average Chlorine Result of All Samples For Month[5] (mg/L): 1.63

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] 4/13/23

DEP Review Status:	☐ Accepted ☐ Disapproved	Review Comments:	

Massachusetts Department of Environmental Protection - Drinking Water Program

CHLORINE/CHLORAMINES - MONTHLY REPORT

Cl

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 D1253-86 ☐

Notes:

DEP APPROVED SAMPLE SITE INFORMATION[1]			CHLORINE RESULT[2] (mg/L)	COLLECTION AND ANALYSIS[3]:		COLLECTED AND ANALYZED BY:
DEP Sample Type[1,4]	DEP Location Code #[1]	DEP Approved SAMPLE LOCATION[1]		DATE	TIME	
RS	003	TOWER HILL SCHOOL - ADAMS STREET	2.14	3/27/23	10:00AM	A. PIERRE-LOUIS
RS	004	JFK SCHOOL - 20 HURLEY DRIVE	1.76		8:00AM	
RS	005	MARTIN E. YOUNG - 30 LOU COURTNEY DRIVE	1.72		9:00AM	
RS	006	COMFORT INN - 1374 NORTH MAIN STREET	2.13		11:00AM	
RS	008	COMMUNITY MIDDLE SCHOOL - 225 HIGH ST	2.11		10:30AM	
RS	011	MOBIL STATION - 93 MAZZEO DRIVE	1.92		9:30AM	
RS	012	7 - 11 FOOD SHOP - 675 NORTH STREET	1.30		8:30AM	
RS	014 AE	AXP AUTO - 317 NORTH MAIN ST	2.02		7:30AM	
RS	016	OAK GROVE STANDPIPE	1.58		10:15AM	
RS	017	SOUTH MAIN STREET STANDPIPE	1.49		9:15AM	

[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 Month[5]: 50 Average Chlorine Result of All Samples For Month[5] (mg/L): 1.63

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: 4/13/23

DEP Review Status:	☐ Accepted ☐ Disapproved	Review Comments:	

Massachusetts Department of Environmental Protection - Drinking Water Program

CT Determination for Filtered Systems

SWTR I

I. PWS INFORMATION:

PWSID#: 4244001 PWS Name: Randolph-Holbrook Joint Water PWS Town: Randolph

Treatment Plant Name: Randolph Water Plant Reporting Period → Month: May Year: 2023

Disinfectant[1]: Chlorine Gas/Fetter 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	2400	2.05	50	102.5	6.6	6	22	4.65	☐ Yes
2	2400	1.97	50	98.5	6.6	6	22	4.48	☐ Yes
3	2400	1.99	50	99.5	6.6	6	22	4.52	☐ Yes
4	2400	2.03	50	101.5	6.6	6	22	4.61	☐ Yes
5	2400	2.01	50	100.5	6.6	7	21	4.79	☐ Yes
6	2400	1.68	50	84	6.6	7	20	4.20	☐ Yes
7	2400	1.78	50	89	6.6	6	22	4.05	☐ Yes
8	2400	1.87	50	93.5	6.6	6	22	4.25	☐ Yes
9	2400	1.94	50	97	6.6	7	21	4.62	☐ Yes
10	2400	1.98	50	99	6.6	7	21	4.71	☐ Yes
11	2400	1.82	50	91	6.6	8	19	4.79	☐ Yes
12	2400	1.64	50	82	6.6	7	20	4.10	☐ Yes
13	2400	2.04	50	102	6.6	7	21	4.86	☐ Yes
14	2400	2.12	50	106	6.6	7	21	5.05	☐ Yes
15	2400	2.16	50	108	6.6	7	21	5.14	☐ Yes
16	2400	2.16	50	108	6.6	6	22	4.91	☐ Yes
17	2400	2.14	50	107	6.6	8	19	5.63	☐ Yes
18	2400	2.06	50	103	6.6	8	19	5.42	☐ Yes
19	2400	2.03	50	101.5	6.6	8	19	5.34	☐ Yes
20	2400	2.16	50	108	6.6	8	19	5.68	☐ Yes
21	2400	2.12	50	106	6.6	8	19	5.58	☐ Yes
22	2400	2.23	50	111.5	6.6	8	19	5.87	☐ Yes
23	2400	2.18	50	109	6.6	9	18	6.06	☐ Yes
24	2400	2.11	50	105.5	6.6	9	18	5.86	☐ Yes
25	2400	2.12	50	106	6.6	9	18	5.89	☐ Yes
26	2400	2.07	50	103.5	6.6	9	18	5.75	☐ Yes
27	2400	2.06	50	103	6.6	9	18	5.72	☐ Yes
28	2400	2.17	50	108.5	6.6	10	17	6.38	☐ Yes
29	2400	2.15	50	107.5	6.6	10	17	6.32	☐ Yes
30	2400	2.14	50	107	6.6	9	18	5.94	☐ Yes
31	2400	2.10	50	105	6.6	10	17	6.18	☐ Yes

1. Use a separate form for each disinfectant/sampling point. Enter disinfectant and sequence position, e.g. "ozone/1st" or "ClO_2/3rd". 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: _____

Date: 2/13/23 Title: Plant Operator

Massachusetts Department of Environmental Protection - Drinking Water Program

TURBIDITY - INDIVIDUAL FILTER MONITORING
For Conventional or Direct Filtered Systems

SWTR J

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: 2023

Total # of Filters at Treatment Plant[1]: 8

II. MONTHLY REPORTING

Filtered Water Turbidity Measured: ☑ Individual Filter Effluent (IFE) or ☐ Combined Filter Effluent (CFE) [2]

Analytical Method: ☐ SM 2130B ☐ EPA 180.1 ☐ GLI Method 2 (Great Lakes)

1.	Was each filter monitored continuously? If continuous monitoring equipment is installed and if it functioned continuously throughout the month, the correct answer is "yes". If continuous monitoring equipment is not installed or did not function continuously throughout the month, the correct answer is "no".	☑ Yes ☐ No
2.	Were measurements recorded every 15 minutes? If measurements on each filter were performed throughout the month and the measurements were recorded every 15 minutes when water was being filtered, the correct answer is "yes". If there was a failure in any continuous monitor, the correct answer is "no".	☑ Yes ☐ No
3.	Was there a failure of continuous turbidity monitoring equipment? If grab samples were obtained due to an equipment failure, the correct answer is "yes". If there was no equipment failure during the month, the correct answer is "no". Systems serving a population of at least 10,000 must conduct grab samples every 4 hours in lieu of continuous monitoring, but for no more than 5 working days following the failure of equipment. Systems serving a population less than 10,000 may use grab samples for up to 14 working days. List filter # and date(s) grab samples collected: Comment:	☐ Yes ☑ No
4.	Were individual filter levels greater than 1.0 NTU in two consecutive measurements? If "yes", systems serving a population of at least 10,000 must produce a filter profile within 7 days of the exceedance or report the obvious reason for the exceedance in the table below. The filter profile is not required to be submitted unless requested, only report that the filter profile has been done. Systems serving a population less than 10,000 shall report exceedance information in the table below. List date(s) a filter profile was produced:	☐ Yes ☑ No
5.	Were individual filter levels greater than 0.5 NTU in two consecutive measurements after the filter has been online for more than 4 hours? If "yes", systems serving a population of at least 10,000 must produce a filter profile within 7 days of the exceedance or report the obvious reason for the exceedance in the table below. The filter profile is not required to be submitted unless requested, only report that the filter profile has been done. *Systems that serve a population less than 10,000 have no required action.* List date(s) a filter profile was produced:	☐ Yes ☑ No
6.	Were individual filter levels greater than 1.0 NTU in two consecutive measurements in three consecutive months? If "yes", the system must conduct a self-assessment of the filter within 14 days of the exceedance. The system is to report that a self-assessment has been completed. Systems with 2 filters that monitor CFE in lieu of IFE must do both filters. *Refer to 310 CMR 22.20D(6)(b)(2) and 310 CMR 22.20F(7)(d)(2) for required filter self-assessment report content.* List date(s) a filter self-assessment was triggered: Report(s) Completed:	☐ Yes ☑ No
7.	Were individual filter levels greater than 2.0 NTU in two consecutive measurements in two consecutive months? If "yes", systems serving a population of at least 10,000 must schedule a Comprehensive Performance Evaluation (CPE) within 30 days of the exceedance and submit the report within 90 days. A system serving a population less than 10,000 must schedule a CPE within 60 days of the exceedance and submit the report within 120 days. List date(s) the CPE was triggered:	☐ Yes ☑ No

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

Filter #	Turbidity Result (NTU)	Date	Reason for Exceedance (if known) 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
J

(Page 2 of 2)

II. 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	0.054	0.024	0.072	0.031	0.213	0.054	0.099	0.028
2	0.047	0.025	0.064	0.030	0.025	—	0.029	—
3	0.024	—	0.032	—	0.058	0.026	0.076	0.058
4	0.050	0.024	0.057	0.031	0.042	0.024	0.125	0.074
5	0.035	0.025	0.089	0.032	0.073	0.026	0.100	0.031
6	0.058	0.026	0.092	0.032	0.026	—	0.030	—
7	0.026	—	0.033	—	0.042	0.032	0.093	0.042
8	0.038	0.026	0.108	0.031	0.106	0.089	0.134	0.099
9	0.038	0.024	0.061	0.029	0.052	0.040	0.114	0.067
10	0.040	0.025	0.060	0.029	0.033	—	0.030	—
11	0.025	—	0.030	—	0.060	0.033	0.048	0.032
12	0.038	0.024	0.045	0.028	0.056	0.040	0.059	0.043
13	3.7	0.024	0.052	0.028	0.061	0.027	0.271	0.144
14	0.036	0.022	0.050	0.027	0.024	—	0.076	—
15	0.021	—	0.026	—	0.050	0.025	0.107	0.107
16	0.042	0.021	0.053	0.026	0.070	0.036	0.055	0.044
17	0.031	0.022	0.061	0.027	0.045	0.026	0.100	0.029
18	0.051	0.023	0.061	0.026	0.025	—	0.032	—
19	0.022	—	0.028	—	0.056	0.028	0.060	0.037
20	0.044	0.024	0.058	0.029	0.066	0.028	0.252	0.111
21	0.094	0.036	0.073	0.029	0.060	0.030	0160	0045
22	0.041	0.024	0.080	0.027	0.026	—	0.030	—
23	0.024	—	0.029	—	0060	0.030	0.106	0.074
24	0.044	0.025	0.077	0.029	0.061	0.035	0.122	0.055
25	0.044	0.024	0.049	0.029	0.060	0.032	0.153	0.042
26	0.049	0.026	0.106	0.029	0.030	—	0.034	—
27	0.025	—	0.030	—	0.055	0.032	0.070	0.034
28	0.065	0.025	0.047	0.027	0.145	0.054	0.119	0.080
29	0.045	0.027	0.072	0.027	0.070	0.030	0.070	0.030
30	0.044	0.024	0.061	0.026	0.027	—	0.030	—
31	0.023	—	0.028	—	0.077	0.024	0.097	0.032

1. 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.
2. 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.
3. Enter the highest daily 15-minute interval turbidity measurement recorded for the filter specified.
4. 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: [signature]

Date: 4/13/23 Title: Plant Operator

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: 5		Filter Number: 6		Filter Number: 7		Filter Number: 8	
	[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	0.023	—	0.023	—	0.079	0.033	0.074	0.030
2	0.103	0.024	0.096	0.024	0.131	0.033	0.101	0.034
3	0.093	0.024	0.273	0.023	0.061	0.032	0.079	0.030
4	0.093	0.024	0.191	0.045	0.032	—	0.030	—
5	0.024	—	0.027	—	0.080	0.034	0.100	0.030
6	0.072	0.026	0.126	0.031	0.170	0.035	0.143	0.032
7	0.141	0.025	0.144	0.032	0.078	0.035	0.125	0.031
8	0.065	0.025	0.176	0.046	0.034	—	0.033	—
9	0.048	—	~~0.150~~ 0.023	—	0.067	0.034	0.076	0.031
10	0.073	0.027	0.167	0.041	0.133	0.034	0.153	0.029
11	0.048	0.028	0.156	0.042	0.064	0.033	0.088	0.028
12	0.050	0.026	0.148	0.031	0.032	—	0.027	—
13	0.026	—	0.027	—	0.075	0.033	0.111	0.027
14	0.220	0.024	0.150	0.028	0.056	0.026	0.073	0.026
15	0.091	0.024	0.395	0.094	0.055	0.025	0.071	0.025
16	0.045	0.024	0.136	0.038	0.025	—	0.025	—
17	0.024	—	0.026	—	0.095	0.026	0.096	0.025
18	0.109	0.024	0.150	0.027	0.080	0.026	0.064	0.027
19	0.104	0.026	0.127	0.037	0.067	0.028	0.078	0.025
20	0.104	0.026	0.136	0.028	0.027	—	0.027	—
21	0.044	—	0.088	—	0.100	0.028	0.126	0.105
22	0.178	0.026	0.197	0.036	0.261	0.028	0.165	0.027
23	0.110	0.028	0.183	0.030	0.075	0.029	0.065	0.027
24	0.071	0.025	0.112	0.030	0.024	—	0.029	—
25	0.025	—	0.030	—	0.099	0.028	0.149	0.028
26	0.160	0.026	0.128	0.042	0.068	0.029	0.106	0.029
27	0.131	0.028	0.195	0.037	0.070	0.029	0.102	0.029
28	0.051	0.024	0.093	0.026	0.026	—	0.026	—
29	0.024	—	0.030	—	0.104	0.026	0.117	0.026
30	0.051	0.024	0.131	0.042	0.219	0.027	0.085	0.027
31	0.083	0.024	0.247	0.030	0.078	0.028	0.086	0.026

1. 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.

tify under penalties of law that I am the person authorized to ut this form and the information contained herein is true, rate and complete to the best extent of my knowledge.

PWS Authorized Signature: William Cooke

Date: 4/13/23 Title: Chief Plant Operator

Massachusetts Department of Environmental Protection - Drinking Water Program

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

TOC

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:**	CO☑ NTNC☐ TNC☐

	DEP LOCATION (LOC) ID#	DEP Location Name	Sample Information		Date Collected: Date	Date Collected: Time	Collected By
A	01S	Great Pond WTP - Raw Water	☐ (M)ultiple ☑ (S)ingle	☑ (R)aw ☐ (F)inished	03/06/2023	09:30	Paul Henessey
B	10300	Combined Filter Effluent	☐ (M)ultiple ☑ (S)ingle	☐ (R)aw ☑ (F)inished	03/06/2023	09:30	Paul Henessey

	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	☑ RS	☐ SS	☑ Original ☐ Resubmitted ☐ Confirmation	☐ Resample ☐ Reanalysis ☐ Report Correction	
B	☐ RS	☐ SS	☑ Original ☐ Resubmitted ☐ Confirmation	☐ Resample ☐ Reanalysis ☐ Report Correction	

	SAMPLE NOTES
A	
B	

II. ANALYTICAL LABORATORY INFORMATION:

Primary Lab MA Cert. #:	M-MA022	**Primary Lab Name:**	Analytical Balance
Analysis Lab MA Cert. #:	M-RI002	**Analysis Lab Name:**	ESS Laboratory

Subcontracted?(Y/N) Y

TOC Analyzed by (check one): ☐ PWS or ☑ Lab **Samples Acidified?** ☑ Yes or ☐ No

	TOC Result (mg/L)	Result Qualifier	MDL (mg/L)	MRL (mg/L)	Dilution Factor	Lab Method	Date Analyzed	Primary Lab Sample ID#	Analytical Lab or PWS Sample ID#
A	5.71		0.500	0.500	1	5310B	03/07/2023	A3C0138-01	
B	2.64		0.500	0.500	1	5310B	03/07/2023	A3C0138-02	

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.
Each source must maintain a running annual average source (raw) water TOC level of ≤ 4.0 mg/L (calculated quarterly).
TOC analysis does not require the use of a Massachusetts or EPA certified laboratory.

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

Alkalinity Analyzed by (check one): ☐ PWS or ☑ Lab

	ALKALINITY Result (mg/L as CaCO3)	Result Qualifier	MDL (mg/L)	MRL (mg/L)	Dilution Factor	Lab Method	Date Analyzed	Primary Lab Sample ID#	Analytical Lab or PWS Sample ID#
A	22.0		4.0			2320B	03/09/2023	A3C0138-01	A3C0138-01
B									

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

	LAB SAMPLE COMMENTS	Result Qualifier	Result Qualifier Description
A	Alkalinity analyzed by Primary Lab		
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: 3/23/2023

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

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

Massachusetts Department of Environmental Protection - Drinking Water Program TT

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
015/10300	RAW WATER/COMBINED FILTER EFFLUENT		

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]
4-22	1	43	35	☐ YES ☐ NO		1.23
5-22	1	49	35	☐ YES ☐ NO		1.40
6-22	1	31	35	☑ YES ☐ NO	TWSUVA	1.00
7-22	1	37	35	☐ YES ☐ NO		1.06
8-22	1	29	35	☑ YES ☐ NO	TW SUVA	1.00
9-22	1	36	35	☐ YES ☐ NO		1.03
10-22	1	41	35	☐ YES ☐ NO		1.17
11-22	1	38	35	☐ YES ☐ NO		1.09
12-22	1	32	35	☑ YES ☐ NO	TW SUVA	1.00
1-23	1	33	35	☑ YES ☐ NO	TW SUVA	1.00
2-23	1	35	45	☐ YES ☐ NO	TW SUVA	1.00
3-23	1	54	45	☐ YES ☐ NO		1.20
				☐ YES ☐ NO		
					Sum of Past 12 Months:	13.18
					Compliance Value (Sum of Past 12 Months/ 12):	1.10

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: [signature]

Date: 4/13/23

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 – (Treated Water TOC ÷ Raw Water TOC)) x 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.		

[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) ☐ Accepted _____ ☐ Disapproved _____	Review Comments	

CERTIFICATE OF ANALYSIS

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

Project Name: DOC SUVA
Work Order Number: A3C0140
Date Received: 03/06/2023

Sampled By: Paul Hennessey
Location: Raw

Date Sampled: 3/6/23 9:30
Matrix: Surface Water

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Detection Limit	DW MCL/ Recommended Limit #	Result
Test Parameters				**LAB-ID#:**	**A3C0140-01**	
Dissolved Organic Carbon (Average)	5310B	3/7/2023	mg/L	0.500	—	4.28
SUVA	4153	3/7/2023	/100 ml	N/A	—	0.0163
UV 254	5910B	3/7/2023	abs/cm	0.002	—	0.070

Sampled By: Paul Hennessey
Location: Combined Filter Effluent Grab

Date Sampled: 3/6/23 9:30
Matrix: Drinking Water

RESULTS OF ANALYSIS

Parameter	Analytical Method	Date Analyzed	Units	Detection Limit	DW MCL/ Recommended Limit #	Result
Test Parameters				**LAB-ID#:**	**A3C0140-02**	
Dissolved Organic Carbon (Average)	5310B	3/7/2023	mg/L	0.500	—	2.86
SUVA	4153	3/7/2023	/100 ml	N/A	—	0.0115
UV 254	5910B	3/7/2023	abs/cm	0.002	—	0.033

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

Approved By:

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 10:57 am, Mar 16, 2023

Massachusetts Department of Environmental Protection – Drinking Water Program **C-ADD**

CHEMICAL ADDITION REPORT – 310 CMR 11.15(4) Chemical Addition Reporting Requirements

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]:	4240001
Treatment Plant Name[2]:	RANDOLPH WATER PLANT	Treatment Plant ID#[2]:		Reporting Period[3]:	March (Month) 2023 (Year)

II. Chemical & Operational Information

Chemical Name[4]:	POLYALUMINUM CHLORIDE	Purchased Strength[8]:	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] ☐Gallons ☐MG	Measured Chemical Used: Volume[17] (gal/day)	Measured Chemical Used: Weight[17] (lbs/day)	Calculated Chemical Used (lbs)[18]	Chemical Dosage[19] (mg/L)	Parameters Measured*, Results, Units and Method[20] - (G)rab or Continuous (A)nalyzer[21] a. ☐G ☐A	b. ☐G ☐A	c. ☐G ☐A	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.
1	2.8	128		1318	19				
2	2.8	110		1133	16				
3	2.8	112		1154	16				
4	2.8	126		1298	18				
5	2.7	112		1154	17				
6	2.8	114		1174	17				
7	2.8	106		1092	15				
8	2.8	100		1030	15				
9	2.8	106		1092	15				
10	2.8	111		1143	16				
11	2.8	115		1185	17				
12	2.6	106		1092	17				
13	2.8	109		1123	16				
14	2.8	112		1154	16				
15	2.7	134		1380	20				
16	2.8	129		1329	19				
17	2.8	129		1329	19				
18	2.8	117		1205	17				
19	2.7	117		1205	18				
20	2.8	108		1112	16				
21	2.7	112		1154	17				
22	2.8	106		1092	15				
23	2.8	115		1185	17				
24	2.8	107		1102	16				
25	2.8	116		1195	17				
26	2.8	108		1112	16				
27	2.7	109		1123	16				
28	2.8	103		1061	15				
29	2.7	131		1349	20				
30	2.8	134		1380	20				
31	2.8	130		1339	19				
Total	85.5								

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.

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 & Date[24]: 4/13/23

Print Name: William Platt Title: Plant Operator

Massachusetts Department of Environmental Protection – Drinking Water Program **C-ADD**

CHEMICAL ADDITION REPORT – 310 CMR 11.15(4) Chemical Addition Reporting Requirements

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

PWS Name[1]:	Randolph - Holbrook SW	Town[1]:	Randolph	PWSID[1]:	4244001
Treatment Plant Name[2]:	Randolph Water Plant	Treatment Plant ID#[2]:	4244001-01T	Reporting Period[3]: Month	March
				Year	2023

II. Chemical & Operational Information

Chemical Name[4]:	Metalic Phosphates	Purchased Strength[8]:	0.1-0.15	Target Range/min[12]:	NA
Manufacturer[5]:	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] ☐Gallons ☐MG	Measured Chemical Used: Volume[17] (gal/day)	Measured Chemical Used: Weight[17] (lbs/day)	Calculated Chemical Used (lbs)[18]	Chemical Dosage[19] (mg/L)	Parameters Measured*, Results, Units and Method[20] - (G)rab or Continuous (A)nalyzer[21]: a. ☐G ☐A	b. ☐G ☐A	c. ☐G ☐A	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.
1	2.6		50		2.3				
2	2.6		50		2.3				
3	2.7		50		2.2				
4	2.6		50		2.3				
5	2.7		50		2.2				
6	2.8		50		2.1				
7	2.7		50		2.2				
8	2.6		50		2.3				
9	2.6		50		2.3				
10	2.7		50		2.2				
11	2.6		50		2.3				
12	2.6		50		2.3				
13	2.7		50		2.2				
14	2.7		50		2.2				
15	2.6		50		2.3				
16	2.6		50		2.3				
17	2.6		50		2.3				
18	2.6		50		2.3				
19	2.6		50		2.3				
20	2.7		50		2.2				
21	2.6		50		2.3				
22	2.7		50		2.2				
23	2.7		50		2.2				
24	2.5		50		2.1				
25	2.7		50		2.2				
26	2.7		50		2.2				
27	2.7		50		2.2				
28	2.7		50		2.2				
29	2.6		50		2.3				
30	2.6		50		2.3				
31	2.7		50		2.2				
Total	80.4		~~50~~ 0P						

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.

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 & Date[24]: 4/13/23

Print Name: William Platt

Title: Plant Operator

Massachusetts Department of Environmental Protection – Drinking Water Program **C-ADD**

CHEMICAL ADDITION REPORT – 310 CMR 11.15(4) Chemical Addition Reporting Requirements

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]:	4244001
Treatment Plant Name[2]:	RANDOLPH WATER PLANT	Treatment Plant ID#[2]:	4244001-01T	Reporting Period[3]: Month	MARCH
				Year	2023

II. Chemical & Operational Information

Chemical Name[4]:	CHLORINE	Purchased Strength[8]:	1.0	Target Range/min[12]:	0.20
Manufacturer[5]:	AXIALL, LLC	Purchased Density (lbs/gal)[9]:	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] ☐Gallons ☒MG	Measured Chemical Used: Volume[17] (gal/day)	Measured Chemical Used: Weight[17] (lbs/day)	Calculated Chemical Used (lbs)[18]	Chemical Dosage[19] (mg/L)	Parameters Measured*, Results, Units and Method[20] - (G)rab or Continuous (A)nalyzer[21]: a. FREE Cl2 DAILY AVG ☒G ☐A	b. FREE Cl2 DAILY MINIMUM ☒G ☐A	c. ☐G ☐A	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.
1	2.8		81		3.5	2.28	2.05		
2	2.8		79		3.4	2.11	1.97		
3	2.8		79		3.4	2.16	1.99		
4	2.8		80		3.4	2.12	2.03		
5	2.7		78		3.3	2.14	2.01		
6	2.8		77		3.3	2.05	1.68		
7	2.8		84		3.6	2.05	1.78		
8	2.8		76		3.3	2.18	1.87		
9	2.8		78		3.3	2.17	1.94		
10	2.8		79		3.4	2.12	1.98		
11	2.8		80		3.4	2.14	1.82		
12	2.6		77		3.6	2.14	1.64		
13	2.8		80		3.4	2.30	2.04		
14	2.8		81		3.5	2.20	2.12		
15	2.7		84		3.7	2.35	2.16		
16	2.8		83		3.6	2.37	2.16		
17	2.8		84		3.6	2.34	2.14		
18	2.8		86		3.7	2.20	2.06		
19	2.7		98		4.4	2.25	2.03		
20	2.8		78		3.3	2.34	2.16		
21	2.7		85		3.8	2.41	2.12		
22	2.8		82		3.5	2.36	2.23		
23	2.8		88		3.8	2.30	2.18		
24	2.8		90		3.4	2.27	2.11		
25	2.8		88		3.8	2.43	2.12		
26	2.8		87		3.7	2.37	2.07		
27	2.7		88		3.9	2.38	2.06		
28	2.8		85		3.6	2.47	2.17		
29	2.7		96		4.3	2.35	2.15		
30	2.8		82		3.5	2.34	2.14		
31	2.8		86		3.7	2.37	2.10		
Total	85.5			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. Daily Average, Free chlorine, Finished Water, Grab Sample.

b. Daily Minimum, Free Chlorine, Finished Water, 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 & Date[24]: 4/13/23

Print Name: William Platt Title: Plant Operator

Massachusetts Department of Environmental Protection – Drinking Water Program **C-ADD**

CHEMICAL ADDITION REPORT – 310 CMR 11.15(4) Chemical Addition Reporting Requirements

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

PWS Name[1]:	Randolph-Holbrook JW	Town[1]:	Randolph	PWSID[1]:	4244001
Treatment Plant Name[2]:	Randolph Water Plant	Treatment Plant ID#[2]:	4244001-017	Reporting Period[3]: Month	March
				Year	2023

II. Chemical & Operational Information

Chemical Name[4]:	Calcium Hydroxide	Purchased Strength[8]:	0.85	Target Range/min[12]:	NA
Manufacturer[5]:	Carmeuse, Lime + Stone	Purchased Density (lbs/gal)[9]:	18.7	Target Dose[13]:	NA
Product Name[6]:	Hydrated Lime	Dilution Factor or Mix Ratio[10]:	NA	Alarm Setting (low)[14]:	NA
Reason for Adding Chemical[7]:	plt Adjustment	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] ☐Gallons ☐MG	Measured Chemical Used: Volume[17] (gal/day)	Measured Chemical Used: Weight[17] (lbs/day)	Calculated Chemical Used (lbs)[18]	Chemical Dosage[19] (mg/L)	Parameters Measured*, Results, Units and Method[20] - (G)rab or Continuous (A)nalyzer[21]: a. Finished pH ☑G ☐A	b. ☐G ☐A	c. ☐G ☐A	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.
1	2.6		50		2.3	6.7			
2	2.6		50		2.3	6.7			
3	2.7		50		2.2	6.7			
4	2.6		50		2.3	6.7			
5	2.7		50		2.2	6.7			
6	2.8		50		2.1	6.7			
7	2.7		50		2.2	6.7			
8	2.6		50		2.3	6.8			
9	2.6		50		2.3	6.7			
10	2.7		50		2.2	6.7			
11	2.6		50		2.3	6.7			
12	2.6		50		2.3	6.7			
13	2.7		50		2.2	6.7			
14	2.7		50		2.2	6.7			
15	2.6		50		2.3	6.7			
16	2.6		50		2.3	6.6			
17	2.6		50		2.3	6.6			
18	2.6		50		2.3	6.6			
19	2.6		50		2.3	6.6			
20	2.7		50		2.2	6.6			
21	2.6		50		2.3	6.7			
22	2.7		50		2.2	6.7			
23	2.7		50		2.2	6.6			
24	2.8		50		2.1	6.7			
25	2.7		50		2.2	6.7			
26	2.7		50		2.2	6.6			
27	2.7		50		2.2	6.6			
28	2.7		50		2.2	6.7			
29	2.6		50		2.3	6.7			
30	2.6		50		2.3	6.7			
31	2.7		50	BP	2.2	6.6			
Total	82.4		~~50~~		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. Grab sample

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 & Date[24]: 4/13/23

Print Name: William Plant Title: Plant Operator