



State of Alaska
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Surface Water Treatment Rules
Monthly Operator Reporting Forms
 For use with Alternate Technology Filtration



These instructions and forms apply to the following type of water treatment system only: Alternate Technology Filtration, ADEC approved to sample CFE turbidity once a day, AND monitoring entry point chlorine residual once a day (ie, either has online chlorine analyzer or serves 500 or fewer individuals per day and is only required to test entry point chlorine residual once a day.)

Page 1 DAILY CHLORINE, COMBINED FILTER EFFLUENT TURBIDITY AND FLUORIDE READINGS

Entry Point Chlorine Residual:

- Chlorine residual readings must be collected daily at the entry point to the distribution system.
 - If using grab samples, measure and record entry point chlorine residual at least once each day. If using an online, continuously monitoring, chlorine analyzer, report the lowest chlorine residual value for each day.)
 - Entry point chlorine residual must be at least 0.2 mg/l at all times.
 - If the entry point chlorine residual drops below 0.2 mg/l, the system must contact ADEC as soon as possible, but no later than the end of the next business day.
- **If chlorine levels drop below 0.2 mg/l for less than 4 hours, no violation will be assessed.***

Combined Filter Effluent Turbidity Reporting - Grab Sample Test Results:

- Systems approved for reduced CFE turbidity monitoring must measure the combined filter effluent (CFE) turbidity at least once each day at approximately the same time each day. If an online CFE turbidimeter has been installed, contact ADEC for updated reporting requirements.
- During the month, 95% of the CFE turbidity measurements must be less than or equal to 1.49 NTUs. Use grab sample test results reported on page 1 and formula provided on page 2 to determine compliance.
- CFE turbidity must not exceed 5 NTUs *at any time* (maximum limit - treatment technique violation).
- If the CFE turbidity exceeds 5 NTUs, the system must contact ADEC within 24 hours.

Fluoride Residual (only required if system is fluoridating):

- Fluoride readings must be collected daily at the entry point to the distribution system.
- Entry point fluoride residual must not exceed 2.0 mg/l.
- If entry point fluoride residual is equal to or greater than 2.0 mg/l, contact ADEC within 24 hours.
- A confirmation sample needs to be sent to the certified laboratory to verify test results the first day entry point fluoride is equal to or greater than 2.0 mg/l.

Page 2 FILTER AND DISINFECTION PERFORMANCE

Combined Filter Effluent - Grab Sample Test Results

- Calculate the percentage of CFE turbidity samples exceeding 1.49 NTUs (Use turbidity measurements recorded on page 1 and formula on page 2 to calculate percentage.)
- System must record each incident in which the CFE turbidity exceeds 5 NTUs and include the date the violation was reported to ADEC.

Entry Point Disinfection Performance Criteria

- System must report each incident in which the entry point chlorine residual dropped below 0.2 mg/l for more than 4 hours, the duration of the incident and include the date the violation was reported to ADEC.

Distribution System Disinfectant Residual Criteria:

- System must report the distribution chlorine residual reading taken **at the same time and place** as each coliform bacteria sample collected during the month.

**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION - DRINKING WATER PROGRAM
DAILY CHLORINE, COMBINED FILTER EFFLUENT AND FLUORIDE READINGS**

Public Water System Name _____

PWSID# _____

Address _____

Phone _____

For the Month of _____, 20__

Type of Filtration: *Alternate Technologies*

Combined Filter Effluent (CFE) Turbidity Limit = 1.49 NTU

Entry Point Chlorine Residual			Combined Filter Effluent Turbidity		Did You Filter		Daily Fluoride Level
Date	Time Recorded	Chlorine Residual	Time Sample Taken	Turbidity (NTU)	Yes	No	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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26							
27							
28							
29							
30							
31							
Total Number Chlorine Residual Measurements			Total Number Turbidity Samples	A =	Total Days Fluoride Measured		
Total Number Chlorine Residual Measurements < 0.2 mg/l			Total Number Turbidity Samples > 5 NTU (MCL)		Total Days Fluoride > = 2.0 mg/l		
			Highest single turbidity reading during month				
			Total Number Turbidity Samples > 1.49 NTU	B =			

Date Submitted _____
 Slow Sand, Diatomaceous Earth or
 Alternate Technology Filtration
 On Reduced Monitoring

Signature of Operator _____

COMBINED FILTER AND DISINFECTION PERFORMANCE

COMBINED FILTER PERFORMANCE CRITERIA

- A. Total number of Combined Filter Effluent (CFE) turbidity measurements during the month
- B. Total number of CFE turbidity measurements that are less than or equal to 1.49 NTU
- C. The percentage of CFE turbidity measurements less than or equal to 1.49 NTU (value in B) divided by the total number of measurements taken during the month (value in A), multiplied by 100

A=
B=

(B/A) X 100 = (/) X 100 = %

Is This Number Less Than 95%? (Y/N)

If CFE turbidity exceeds 5 NTU, report the event to ADEC within 24 hours and record it below:

TABLE 1 - DAYS CFE TURBIDITY MEASUREMENTS EXCEEDED 5 NTU								
Date	Turbidity	State	Date	Turbidity	State	Date	Turbidity	State
Total Number of Days CFE TURBIDITY Measurements Exceeded 5 NTU								

ENTRY POINT DISINFECTION PERFORMANCE CRITERIA

If the entry point disinfectant residual drops below 0.2 mg/l, report it to ADEC as soon as possible, but no later than the next business day. Record dates and time entry point chlorine residual was less than 0.2 mg/l below:

TABLE 2 - DAYS CHLORINE RESIDUAL ENTERING DISTRIBUTION WAS LESS THAN 0.2 MG/L								
Date	Duration	Reported to	Date	Duration	Reported to	Date	Duration	Reported to
Total Number of Days Entry Point Chlorine Was Less Than 0.2 mg/l								

DISTRIBUTION SYSTEM DISINFECTANT RESIDUAL CRITERIA

At a minimum, the distribution chlorine residuals must be measured at the same time and place that the coliform sample is taken. In the table below, enter all the dates a coliform sample was taken, the location, and the corresponding chlorine residual measurement taken at the same time and place.

TABLE 3 - DISTRIBUTION CHLORINE RESIDUAL READINGS								
Date	Location	Residual	Date	Location	Residual	Date	Location	Residual
Total number of chlorine residual measurements taken that were 'non-detect':								

If system conducts heterotrophic plate counts when chlorine residual is at a non-detectable level, contact ADEC for further reporting requirements.