COOLING TOWER ANNUAL CERTIFICATION TEMPLATE

VERSION: OCTOBER 25, 2017

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection

INTRODUCTION

10NYCRR Subpart 4-1, Protection Against *Legionella*, regulates the operation of cooling towers (cooling towers, evaporative coolers and condensers) in New York State. Section 4-1 (b) requires, by November 1 of each year, the owner of a cooling tower to obtain a certification that the cooling tower has a maintenance program and plan, and that all activities within the plan or required by Subpart 4-1 have been implemented appropriately.

Please note that each individual cooling tower requires its own certification document.

PURPOSE

The purpose of this document is to provide a recommended template for the required certification document. The template contains all the elements of certification required by Subpart 4-1. If necessary, cooling tower owners and certifiers may modify the format to suit their needs.

AUDIENCE

This template is intended for use by:

1. Cooling tower owners, defined in Section 4-1.2 as follows: "any person, agent, firm, partnership, corporation or other legal entity having a legal or equitable interest in, or control of, a cooling tower or the premises where the cooling tower is located;" and
2. Cooling tower water treatment consultants and maintenance providers, defined here as persons, firms, or other entities that provide cleaning, inspection, sampling, disinfection, and/or other services that ensure the proper functioning of an owner's cooling tower as it pertains to Subpart 4-1.

DISCLAIMER

This is a suggested outline for an annual cooling tower certification required by Subpart 4-1 of the New York State Sanitary Code. This material should be considered the minimum suggested reportable information; each cooling tower and situation is unique and an expansion of elements on a case by case basis may be required.

NOTE: Materials presented in brackets throughout this document are for instructional purposes. They do not have to be included in the final document.

COOLING TOWER ANNUAL CERTIFICATION CHECK LIST

[Instructions: Use the following check list as a means of determining the completeness of a cooling tower annual certification.]

Items to be evaluated for certification:

FACILITY INFORMATION (SEE SECTION 1 OF OUTLINE)

- Tower location
- Cooling tower certifier (company) information
- Date of certification
- Cooling tower information

MAINTENANCE PROGRAM AND PLAN CERTIFICATION (SEE SECTION 2 OF OUTLINE)

INSPECTIONS (SEE SECTION 3 OF OUTLINE)

- Inspection dates
- Inspection responses

BACTERIOLOGICAL (NOT *LEGIONELLA*) SAMPLING RESULTS (SEE SECTION 4 OF OUTLINE)

- Bacteriological sampling results table
- Summary of findings

LEGIONELLA SAMPLING RESULTS TABLE (SEE SECTION 5 OF OUTLINE)

- *Legionella* sampling results table
- Summary of findings

COOLING TOWER DISINFECTION EVENTS (SEE SECTION 6 OF OUTLINE)

- Record of disinfection and decontamination events
- Summary of findings

COOLING TOWER MAINTENANCE PROGRAM AND PLAN CERTIFICATION (SEE SECTION 7 OF OUTLINE)

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COOLING TOWER ANNUAL CERTIFICATION TEMPLATE

PREPARED FOR:

PREPARED BY:

EFFECTIVE DATE:

VERSION 2.0

CONTENTS

SECTION 1. FACILITY INFORMATION

[Instructions: Insert the appropriate information into the fields below.]

1.1 TOWER LOCATION

Company name	
Point of contact name	
Point of contact phone	
Street address	
Building name (if applicable)	
City, town, or village	
County	
Latitude-longitude if available	

1.2 COOLING TOWER CERTIFIER (COMPANY NAME)[1]

Company name	
Point of contact name	
Point of contact title	
Point of contact phone (office)	
Point of contact phone (mobile)	
Email address	
Street address	
City, state, ZIP code	

1.3 DATE OF LAST CERTIFICATION

Date	

1.4 COOLING TOWER INFORMATION

[It is important to develop a log of the pertinent identification information for a cooling tower. The following is considered the "nameplate" data that are useful for equipment identification. These data are typically available from the design drawings, operation information and the tower itself.]

Manufacturer of cooling tower	
Model number of cooling tower	
Serial number of cooling tower	
Equipment ID number from New York State Registry	
Registration number from New York City Registry	
Year commissioned	

[1] Cooling tower owners are responsible for certification under NYC law (see p. 9)

Thermal cooling capacity of cooling tower	
Cooling tower type (e.g. cooling tower, evaporative cooler, evaporative condenser, etc.)	
Description of the process from which heat is being removed	
Water source (e.g., municipal water company, onsite)	
Water disposal method (sanitary sewer company, onsite disposal, discharge by permit to the environment, etc.)	

1.2 ADDITIONAL NARRATIVE:

[Add any additional narrative that may be used to augment the information that was recorded in Section 1.1 above.]

SECTION 2. MAINTENANCE PROGRAM AND PLAN

[Subpart 4-1 requires cooling towers to have a maintenance program and plan developed specifically for each system. In this section, the author of the certification should attest to the existence of a plan and that it was followed. Any and all deviations from the plan should be outlined in this section with explanations as to why the deviations were made.]

Does a maintenance program and plan exist? (Yes/No)	

2.1 SUMMARY OF DEVIATIONS:

[Provide a summary of any deviations from the sampling and maintenance plan referenced above.]

SECTION 3. INSPECTIONS

[Inspections are an integral part of maintaining the safe and efficient operation of cooling towers. Cooling towers are required by Section 4-1.8 (a)(1) to be inspected prior to seasonal start-up and at intervals not to exceed every 90 days while the tower is in use. Year-round towers are required to be inspected at intervals not exceeding every 90 days and prior to start-up, following maintenance operations. In this section, a record of inspections is required. The table shown below is an example of how the information may be summarized. The certification report author may choose to add additional information.

Section 4-1.8 (c) requires all inspection findings, deficiencies, corrective actions, and all documentation of activities performed to be reported to the owner, who is required to retain such information. All deficiencies and their corresponding corrective actions and documentation of corrections for the past operating season should be documented in this section. If this document is in electronic format, then scanned images in portable document format (PDF) may be attached to this section.]

3.1 INSPECTION RESULTS

Inspection Date	Findings and Deficiencies	Corrective Actions Taken	Documentation? (yes/no)

3.2 ADDITIONAL NARRATIVE:

[Add any additional narrative that may be used to augment the information that was recorded in Section 3.1 above.]

SECTION 4. BACTERIOLOGICAL SAMPLING RESULTS

[Section 4-1.8 requires cooling tower water culture sampling to assess microbiological activity at intervals no greater than 30 days while the cooling tower is in use. The purpose of the bacteriological sampling is for process validation and to provide data for feedback for future process adjustments. As part of the certification process, the data that were collected during the operation season must be summarized here, preferably in tabular form to provide detailed documentation of the culturing results. One form of the table used for this summary is shown below.]

4.1 BACTERIOLOGICAL SAMPLING RESULTS TABLE

Date Sampled	Volume Analyzed	Culture Result	Units (e.g. CFU/ml, CFU/100 ml, etc.)

4.2 SUMMARY OF FINDINGS

[During the course of the operating season, process validation will provide feedback on the efficacy of the cooling tower treatment program. This section should summarize the responses to upset conditions and "lessons learned" concerning how the existing treatment program evolved to address bacteriological and/or culture results.]

Date of Result	Finding	Corrective Action

4.2 ADDITIONAL NARRATIVE:

[Add any additional narrative that may be used to augment the information that was recorded in Section 4.1 above.]

SECTION 5. *LEGIONELLA* SAMPLING RESULTS

[Routine *Legionella* culture sampling is required by Section 4-1.4 (b)(2): within 14 days after seasonal start-up (effective July 6, 2016) and thereafter, at intervals not to exceed 90 days while the cooling tower is in use. Cooling towers that are in use year-round must be sampled at intervals not to exceed 90 days, and within two weeks after start-up following maintenance operations. As part of the certification process, the data that were collected during the operation season should be summarized here, preferably in tabular form to provide detailed documentation of the culturing results. This includes both routine sampling and any follow-up sampling conducted in response to an exceedance or other event. One form of the table used for this summary is shown below.]

5.1 *LEGIONELLA* SAMPLING RESULTS TABLE

Date Sampled	Volume Analyzed	Culture Result	Units (e.g. CFU/ml, CFU/100 ml, etc.)

5.2 ADDITIONAL NARRATIVE:

[Add any additional narrative that may be used to augment the information that was recorded in Section 5.1 above.]

SECTION 6. COOLING TOWER DISINFECTION

[Legionella culture sampling results having values equal to or greater than 20 CFU/mL require an intervention of either online disinfection or online decontamination as outlined in Appendix 4-A of Subpart 4-1. This section should document all online disinfection and/or decontamination procedures used in response to culture samples that equaled or exceeded 20 CFU/mL. Culture results ≥ 1000 CFU/mL require public notification and an appropriate response according to Appendix 4-A. Include these events in the record below. In addition to online decontamination and disinfection procedures, a cooling tower manager may decide to perform other maintenance procedures as a means of addressing high *Legionella* bacteria concentrations. These procedures are considered events that should be included in this compendium. During the course of an operating season, it will become more apparent what types of disinfection or decontamination procedures are most effective. Document those most effective procedures in section 6.2 below.]

6.1 RECORD OF DISINFECTION, DECONTAMINATION, SAMPLING AND OTHER EVENTS IN RESPONSE TO *LEGIONELLA* CONCENTRATION EXCEEDANCES

Date	Event Type (Disinfection, Decontamination or Other Procedure(s))	Date of Prior *Legionella* Culture Sample	Biocide used

6.2 ADDITIONAL NARRATIVE

[Add any additional narrative that may be used to augment the information that was recorded in Section 6.1 above.]

SECTION 7. CERTIFICATION

By signing below, I attest that all the data entered above is true and correct to the best of my knowledge, that I understand that such information shall be used for assessing regulatory compliance, and that I am authorized to report this data on behalf of the cooling tower owner.

Certifier printed name: _____

Title: _____ Company: _____

Signature: _____ Date: _____

For cooling towers subject to New York City Health Code, Title 24, Chapter 8 and Local Law 77 of 2015, the attestation must be signed by the building owner or the owner's authorized representative (RCNY §8-07(b)).

Building Owner printed name: _____

Title: _____ Company: _____

Signature: _____ _ Date: _____