



NEW YORK CITY
DEPARTMENT OF HEALTH AND MENTAL HYGIENE

**Notice of public hearing and opportunity to comment
on proposed rules concerning cooling towers**

What are we proposing? The New York City Department of Health and Mental Hygiene (Department) is proposing to amend its rules concerning cooling towers, which are found in Chapter 8 of Title 24 of the Rules of the City of New York (RCNY). This proposed rule amendment would establish a requirement for the performance of a summertime hyperhalogenation (a one-time per year dosing of higher-than-normal levels of chlorine or bromine based biocide between July 1 and August 31) of a cooling tower system in order to minimize the risks of *Legionella* bacteria growth.

When and where is the hearing? The New York City Department of Health and Mental Hygiene will hold a public hearing on the proposed rule. The public hearing will take place at 10:00A.M. to 12PM on Monday, June 29, 2020. The hearing will be conducted by video conference:

- **Internet Video and Audio.** To participate in the public hearing, enter the Webex URL:
<https://nycdohmh.webex.com/nycdohmh/onstage/g.php?MTID=e00be3f67e60fc50cfb5c1fcad104fa2c>

If prompted to provide a password or number, please enter the following:

Meeting Number: 719 757 328; Password: Health

- **Phone.** For access, dial: **(408) 418-9388; Access code: 719 757 328; Password: Health**

How do I comment on the proposed rules? Anyone can comment on the proposed rules by:

- **Website.** You can submit comments to the Department through the NYC Rules website at <http://rules.cityofnewyork.us>
- **Email.** You can email written comments to resolutioncomments@health.nyc.gov
- **Mail.** You can mail written comments to:
New York City Department of Health and Mental Hygiene
Gotham Center, 42-09 28th Street, 14th Floor, CN 30
Attn: Svetlana Burdeynik
Long Island City, NY 11101-4132
- **Fax.** You can fax written comments to the Department at 347-396-6087.
- **By speaking at the hearing.** Anyone who wants to comment on the proposed rule at the public hearing must sign up to speak. You can sign up before the hearing by calling Svetlana Burdeynik at 347-396-6078 or by emailing at resolutioncomments@health.nyc.gov by June 26, 2020 at 5:00 P.M. While you will be given the opportunity during the hearing to indicate that you would like to provide comments, we prefer that you sign-up in advance. You can speak for up to three minutes.

Is there a deadline to submit written comments? Written comments must be received on or before 5:00 p.m. on June 29, 2020.

What if I need assistance to participate in the hearing? You must tell the Department's Office of General Counsel if you need a reasonable accommodation of a disability at the hearing. You must tell us if you need a sign language interpreter. You can tell us by e-mail or by mail at the address given above. You may also tell us by telephone at 347-396-6078. Advance notice is requested to allow sufficient time to arrange the accommodation. Please tell us by June 15, 2020.

Can I review the comments made on the proposed rules? You can review the comments made online on the proposed rule by going to the following website: <http://rules.cityofnewyork.us/>. A few days after the hearing, copies of all comments submitted online, copies of all written comments, and a summary of oral comments concerning the proposed rule will be available to the public at the Office of the Secretary.

What authorizes the Department to make these rules? Sections 555(b)(2), 556, 558(b) and (e), and 1043 of the New York City Charter (Charter) and §17-194.1 of the New York City Administrative Code authorize the Department to make these proposed rules.

Where can I find the Department's rules? The rules of the Department are in Title 24 of the Rules of the City of New York.

What laws govern the rulemaking process? The Department must meet the requirements of §1043 of the Charter when creating or changing rules. This notice is made according to the requirements of Charter §1043. The proposed rule was included in the agency's regulatory agenda.

Statement of Basis and Purpose

Chapter 8 of Title 24 of the RCNY (Chapter 8) contains the Department's rules for the operation and maintenance of cooling towers in the City. A cooling tower is a device that extracts heat to the atmosphere through the cooling of a water stream to a lower temperature. The term "cooling tower" includes any evaporative cooling equipment with recirculating water, including direct (open circuit) and indirect (closed circuit) cooling towers, evaporative condensers, or evaporative spray fluid coolers capable of aerosolizing water. Common applications of cooling towers are for air conditioning, refrigeration, industrial/manufacturing processing or electric power generation. This includes mobile or portable cooling towers. A cooling tower may comprise one or more cooling tower cells.

Because water within a cooling tower uses heat exchange, it can provide an ideal environment for *Legionella* bacteria to grow, particularly if the cooling tower is not properly disinfected and maintained. Exposure to the *Legionella* bacteria (*Legionella pneumophila*) can cause Legionellosis disease. Cases of Legionellosis must be reported to the Department in accordance with section 11.03 of the Health Code and section 2.1 of the New York State Sanitary Code (found in title 10 of the New York Codes, Rules and Regulations). The more serious form of Legionellosis is a pneumonia known as Legionnaires' disease; a less serious form of Legionellosis is known as Pontiac fever, which is a flu-like illness. Legionnaires' disease is known to have a case fatality rate of 5-30%. The US Centers for Disease Control and Prevention estimates that there are between 8,000 and 18,000 cases of Legionnaires' disease in the United States annually and that more than 10% of cases are fatal¹.

Section 8-04 of Chapter 8 provides requirements for cooling tower process control measures. The Department is proposing to require a summertime hyperhalogenation, a one-time per year dosing of higher-than-normal levels of chlorine or bromine based biocide, to each cooling tower system between July and August 31. Periodic hyperhalogenation is an effective method of limiting *Legionella* in recirculating water by preventing the risk of biofilm growth, which can be a host for *Legionella* survival

¹ <http://www.cdc.gov/legionella/fastfacts.html>
<http://www.cdc.gov/legionella/index.html>
<http://www.cdc.gov/legionella/about/treatment-complications.html>

and replication. Periodic hyperhalogenation performed routinely, while ensuring water flow throughout the cooling tower system and all its components, may reduce the need for more intensive cleaning and disinfection procedures in the future. The Department's *Legionella* sampling results indicate that concentrations of the bacteria are highest during the summertime months. Surveillance data also indicates more cases of Legionnaires' disease during the summertime.

Accordingly, Section 8-04 is proposed to be amended by establishing a new subdivision (f) requiring a summertime hyperhalogenation to be conducted for each cooling tower system at least once each year between July 1 and August 31. Summertime hyperhalogenation is expected to occur this summer, 2020, but an owner is not required to update their cooling tower maintenance plans until the 2021 cooling season. Finally, the penalty schedule in §8-09 of Chapter 8 is proposed to be amended to include monetary penalties associated with the violation of this proposed requirement.

Statutory Authority

This amendment is proposed pursuant to sections 556 and 1043 of the Charter and section 17-194.1 of the New York City Administrative Code ("Administrative Code"). Section 556 of the Charter authorizes the Department to regulate all matters pertaining to the health of the City. Charter section 1043 grants the Department rulemaking authority. Section 17-194.1 of the Administrative Code requires owners of buildings with cooling towers to maintain, clean and disinfect such cooling towers and authorizes the Department to adopt rules to implement these requirements.

The proposed rule changes are as follows:

Underlined text is new.

Deleted text is in [brackets].

"Shall" and "must" denote mandatory requirements and may be used interchangeably in the rules of this Department, unless otherwise specified or unless the context clearly indicates otherwise.

Section 1. Section 8-02 of Chapter 8 of Title 24 of the Rules of the City of New York is amended by adding a new definition of "summertime hyperhalogenation" in alphabetical order to read as follows:

"Summertime hyperhalogenation" means a one-time per year dosing of higher than normal levels of chlorine or bromine based biocide conducted between July 1 and August 31 to ensure the maintenance of a minimum of 5 parts per million (ppm) free halogen residual in the cooling tower system for at least 6 hours.

Section 2. Section 8-04 of Chapter 8 of Title 24 of the Rules of the City of New York is amended by adding a new subdivision (f) to read as follows:

(f) *Summertime hyperhalogenation.* (1) A cooling tower system must undergo a summertime hyperhalogenation at least once each year between July 1 and August 31 in accordance with this subdivision. The hyperhalogenation must be performed by a person qualified to apply biocide pursuant to §8-05(c)(1). The hyperhalogenation must be performed with a registered chlorine or bromine based biocide that is effective at *Legionella* control in accordance with §8-05(c). A cooling tower system is exempt from this subdivision if it is in full system shutdown and completely drained of water, in accordance with §8-06(a), for the entire period between July 1 and August 31.

(2) Prior to the hyperhalogenation, the cooling tower system must be prepared to ensure that water flow reaches the entire cooling tower system. Biocide applied during the hyperhalogenation must reach all parts of the cooling tower system, including offline or standby equipment that may be out of service, or only used on-demand or during peak demand periods.

(3) During the hyperhalogenation, a minimum of 5 ppm free halogen residual must be continuously maintained in the cooling tower system for at least six hours. Additionally, the pH and halogen residuals must be measured at two independent sampling locations within the cooling tower system during the hyperhalogenation to verify the minimum biocide residual was achieved and maintained. The water treatment program shall be reviewed by the management and maintenance team to determine if additional chemical inhibitors are desirable to prevent corrosion and scaling.

(4) A Legionella culture sample must be collected in accordance with §8-05(f)(3) within 15 to 45 days after the hyperhalogenation required by paragraph (1) of this subdivision. Sample results must be interpreted, and corrective actions implemented, in accordance with the result levels indicated in Table 8-1 of this Chapter.

(5) An owner must submit an affidavit of correction within 2 days of completion of the hyperhalogenation required by paragraph (1) of this subdivision through the NYC Cooling Tower Registration Portal. The affidavit must include the cooling tower system ID; the hyperhalogenation protocol performed, including the name and quantity of biocides and chemicals applied; dose and contact time; effective pH range of biocides; pH and halogen residual monitoring results during hyperhalogenation; service date and name and qualifications of the person who applied the biocide.

Section 3. Section 8-09 of Chapter 8 of Title 24 of the Rules of the City of New York is amended by adding a new penalty for section of law 24 RCNY §8-04(f) in numerical order to read as follows:

| | | | |
|--------------------------------|---|---------------------|----------------------|
| <p><u>24 RCNY §8-04(f)</u></p> | <p><u>Failure to submit documentation of a hyperhalogenation performed at least once each year between July 1 and August 31</u></p> | <p><u>\$500</u></p> | <p><u>\$1000</u></p> |
|--------------------------------|---|---------------------|----------------------|

**NEW YORK CITY MAYOR'S OFFICE OF OPERATIONS
253 BROADWAY, 10th FLOOR
NEW YORK, NY 10007
212-788-1400**

**CERTIFICATION / ANALYSIS
PURSUANT TO CHARTER SECTION 1043(d)**

RULE TITLE: Hyperhalogenation of Cooling Tower Systems

REFERENCE NUMBER: DOHMH-112

RULEMAKING AGENCY: Department of Health and Mental Hygiene

I certify that this office has analyzed the proposed rule referenced above as required by Section 1043(d) of the New York City Charter, and that the proposed rule referenced above:

- (i) Is understandable and written in plain language for the discrete regulated community or communities;
- (ii) Minimizes compliance costs for the discrete regulated community or communities consistent with achieving the stated purpose of the rule; and
- (iii) Does not provide a cure period because the violations pose significant risks to public health and safety.

/s/ Francisco X. Navarro
Mayor's Office of Operations

May 23, 2020
Date

**NEW YORK CITY LAW DEPARTMENT
DIVISION OF LEGAL COUNSEL
100 CHURCH STREET
NEW YORK, NY 10007
212-356-4028**

**CERTIFICATION PURSUANT TO
CHARTER §1043(d)**

RULE TITLE: Hyperhalogenation of Cooling Tower Systems

REFERENCE NUMBER: 2020 RG 054

RULEMAKING AGENCY: Department of Health and Mental Hygiene

I certify that this office has reviewed the above-referenced proposed rule as required by section 1043(d) of the New York City Charter, and that the above-referenced proposed rule:

- (i) is drafted so as to accomplish the purpose of the authorizing provisions of law;
- (ii) is not in conflict with other applicable rules;
- (iii) to the extent practicable and appropriate, is narrowly drawn to achieve its stated purpose; and
- (iv) to the extent practicable and appropriate, contains a statement of basis and purpose that provides a clear explanation of the rule and the requirements imposed by the rule.

/s/ STEVEN GOULDEN
Acting Corporation Counsel

Date: May 22, 2020