



NEW YORK CITY DEPARTMENT OF  
HEALTH AND MENTAL HYGIENE  
Alister F. Martin, MD, MPP  
*Commissioner*

<Date of Order>

## ORDER OF THE COMMISSIONER

**Diane Fung, PE, MPH**  
Assistant Commissioner  
Bureau of Environmental  
Sciences and Engineering

To: <Building Name>  
<Building Address>

**Mailing Address:**  
42-09 28th Street, CN #56  
Long Island City, NY 11101

As owners, agents, managers and/or other persons in control of  
premises located at

+1 718 786 6004 tel  
+1 347 396 8812 fax

<Business Name>  
<Address>  
Manhattan, NY <ZipCode>  
BIN: <BIN>  
Borough, Block, Lot: <BBL>  
Cooling Tower System Registration ID#: <System ID>

**WHEREAS**, the New York City Department of Health and Mental Hygiene (the “NYC Health Department” ) is currently investigating a community cluster of Legionnaires’ disease, a communicable disease reportable to the NYC Health Department pursuant to section 11.03 of the NYC Health Code (the “Health Code”) and section 2.1 (10 NYCRR Chapter 1, Part 2) of the New York State Sanitary Code (the “NYS Sanitary Code”), occurring in persons residing in the **Carnegie Hill and Yorkville neighborhoods of Manhattan**; and

**WHEREAS**, pursuant to section 11.03(e) of the Health Code, the NYC Health Department is authorized to “conduct such surveillance, epidemiologic and laboratory investigation activities as it shall deem necessary to verify the diagnosis, ascertain the source or cause of infection, injury or illness, identify additional cases, contacts, carriers or others at risk, and implement public health measures to control the disease or condition and prevent additional morbidity or mortality”; and

**WHEREAS**, section 2.6(b) (10 NYCRR Chapter 1, Part 2) of the NYS Sanitary Code further authorizes and requires the NYC Health Department “to collect and submit, or cause to be collected and submitted, for laboratory examination such specimens as may furnish necessary or desirable information in determining the source of the infection or in assisting diagnosis. ...”; and

**WHEREAS**, a sample collected by the NYC Health Department on <SampleDate>, from the above-referenced cooling tower located within the Carnegie Hill and Yorkville neighborhoods indicated the presence of *Legionella* bacteria; and

**WHEREAS**, the presence of *Legionella* bacteria constitutes a danger to human life and is detrimental to public health and is therefore a nuisance as defined by section 17-142 of the NYC Administrative Code; and

**WHEREAS**, pursuant to sections 17-114, 17-142, 17-143, 17-144, 17-145 and 17-194.1(g) of the NYC Administrative Code and section 3.09 of the Health Code, the NYC Health Department is authorized to take such actions to abate the presence of any nuisance to public health; and

**WHEREAS**, pursuant to Chapter 8 of Title 24 of the Rules of the City of New York ("Chapter 8") and section 17-194.1 of the NYC Administrative Code, the NYC Health Department requires registration of cooling towers in NYC and sets forth operation and maintenance requirements including actions that are necessary to protect the health or safety of the public; and

**WHEREAS**, pursuant to section 3.07 of the Health Code, "no person shall do or assist in any act which is or may be detrimental to the public health or to the life or health of any individual ... or fail to do any reasonable act or take any necessary precaution to protect human life and health"; and

**WHEREAS**, section 3.01(c) of the Health Code empowers the NYC Health Department to take such action as may become necessary to assure the maintenance of public health; and therefore

**IT IS HEREBY ORDERED** that you must:

- (1) **Within 24 hours of service of this Order**, retain the services of a qualified person as defined in section 8-02 of Chapter 8, to supervise and initiate the corrective actions described in paragraph (2) below. Confirm the qualified person has accepted the role in the "Qualified Persons Info" webpage on the [NYC Cooling Tower Registration Portal](#).
- (2) **Within 24 hours of service of this Order**, initiate a corrective action by conducting a hyperhalogenation, cleaning, and flushing of the cooling tower system (CTS) under the direction of the qualified person.
  - a. "Hyperhalogenation" shall mean applying a biocide to maintain a target chlorine or free halogen residual in the cooling water system.
    - i. Prepare for this work by ensuring water flows through the whole CTS and all components. If there is risk of odor or overspray, shut off fans of the cooling tower during remedial activities.
    - ii. Use ONE of the 4 procedures below, which combine a minimal disinfectant residual with continuous application of a biocide for a specified time period.
    - iii. To validate that the procedure is complete, you must measure pH and chlorine (or an equivalent free halogen) at or above the minimum disinfectant residual for the intervals shown below at two independent monitoring locations.

**Table 1: Hyperhalogenation Procedures: Technical Requirements**

| Options<br>(select <u>ONE</u> ) | Minimum<br>Disinfectant<br>Residual <sup>1</sup> | Time Period for<br>Continuous<br>Biocide<br>Application | Required Validation of pH and Disinfectant<br>Residual <sup>2</sup><br>(collect at <u>two</u> monitoring locations) |
|---------------------------------|--------------------------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 1                               | ≥50 ppm                                          | 1 hour                                                  | 5 measurements taken once every 10 minutes                                                                          |
| 2                               | ≥25 ppm                                          | 2 hours                                                 | 6 measurements taken once every 20 minutes                                                                          |
| 3                               | ≥10 ppm                                          | 5 hours                                                 | 5 measurements taken once every 1 hour                                                                              |
| 4                               | ≥5 ppm                                           | 24 hours                                                | 12 measurements taken once every 2 hours                                                                            |

<sup>1</sup> ppm = parts per million

<sup>2</sup> pH must be maintained between 7.0 to 7.6 for chlorine-based biocides or 7.7 to 9.0 for bromine-based biocides.

- b. “Cleaning” shall mean physical, mechanical and/or other removal of potential sources of contamination. For the purpose of this Order, it shall include:
  - i. Power washing, scrubbing, and flushing of any accessible CTS components for the removal of fouling (slime, mold, fungi, algae, biofilm, plant and other organic materials), build-up (oil and grease, corrosion products, scale, debris, rust, sludge, silt, sediments, non-organic materials) and any other potential contaminants.
  - ii. Application, circulation and flushing of detergents, dispersants and/or compatible biocides, separate from the hyperhalogenation process, as required to achieve effective cleaning. This process must include any internal wetted surfaces where condenser water in the CTS may flow including any equipment that may be hydraulically connected to the CTS whether that equipment is currently in use, offline, or on standby such as heat exchangers, chillers, and other heat transfer devices and components.
- c. “Flushing” shall mean of the removal of all water from the cooling tower system, including all components such as cooling tower equipment basins, heat exchangers, chillers, recirculation piping, and disposing of it properly to remove any remaining contaminants during and after cleaning. The cooling tower system shall then be refilled with fresh makeup water.

**(3) Within 48 hours of service of this Order,** complete the corrective action described in (2).

**(4) Within 24 hours after corrective action is completed,**

- a. Submit the *Declaration of Corrective Action for Hyperhalogenation, Clean and Disinfect* (Form CT-PHH DC03) via email to [CTCompliance@health.nyc.gov](mailto:CTCompliance@health.nyc.gov).
- b. The form must be completed by a qualified person attesting that the hyperhalogenation, cleaning, and flushing have been completed as required by this Order.

**(5) Within 72 hours of service of this Order,**

- a. Submit the *Cooling Tower System Assessment Form* (Form CT-ASF) via email to [CTCompliance@health.nyc.gov](mailto:CTCompliance@health.nyc.gov).
- b. The form must be completed by a qualified person.

**(6) Within 3 to 7 days after corrective action is completed,**

- a. Collect a post-corrective action *Legionella* sample.
- b. Sample collection must meet all requirements of the New York State Environmental Laboratory Approval Program (ELAP) Certification Manual for Microbial Tests of Water Samples (ELAP Certification Manual Item 245), including hold time, transport and storage requirements, inactivation of disinfectants and disclosure of any biocides in the container at the time of sampling.
- c. Within 1 calendar day of sample collection, submit the completed chain of custody and field water quality monitoring data via email to [CTcompliance@health.nyc.gov](mailto:CTcompliance@health.nyc.gov).

**(7) Within 24 hours of receipt of *Legionella* sample results associated with this Order,**

- a. Submit copies of laboratory analytical sample report(s) via email to [CTcompliance@health.nyc.gov](mailto:CTcompliance@health.nyc.gov).
- b. The final analytical laboratory report must include the laboratory's ELAP certification number, the building address/location, the sample location(s), the sample ID, the sample collection date, the sample receipt date, the laboratory report date, and the analytical result with specified units and *Legionella* serotype.

**(8) For any positive *Legionella* samples,**

- a. Perform and document corrective action(s) as per [Table 8-1 of Chapter 8](#).
- b. Culture isolates must be retained by the analytical laboratory for at least 3 months and, if requested, be prepared for shipment and delivery in a manner specified by the NYC Health Department to our Public Health Laboratory.

For information about how to comply with this Order, please email or call the Office of Building Water Systems Oversight.

If you wish to contest (object to) the order, write or email the Office of General Counsel (OGC), New York City Department of Health and Mental Hygiene, 42-09 28th Street, CN30, Long Island City, NY 11101-4132; [OGC@health.nyc.gov](mailto:OGC@health.nyc.gov), within three (3) business days of receiving this Order, and provide a statement of the reasons for your objection along with a copy of this Order.

Attachments to this Order:

*Declaration of Corrective Action* (Form CT-PHH DC03)

*Cooling Tower System Assessment Form* (Form CT-ASF)

Dated: < Date of Order>

Diane Fung, PE, MPH  
Assistant Commissioner  
Bureau of Environmental Sciences and Engineering

**Failure to comply with an Order of the Commissioner is a violation of section 3.05 of the Health Code and a misdemeanor for which you may be subject to civil and criminal fines, penalties, and forfeitures.**