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ENVIRONMENTAL PUBLIC HEALTH ACT
(CHAPTER 95)

ENVIRONMENTAL PUBLIC HEALTH
(LICENSABLE AQUATIC FACILITIES)
REGULATIONS 2021

ARRANGEMENT OF REGULATIONS

PART 1

PRELIMINARY

Regulation

1. Citation and commencement
2. Definitions

PART 2

AQUATIC FACILITY LICENCE APPLICATIONS

3. Application for or to renew aquatic facility licence

PART 3

DUTIES OF AQUATIC FACILITY LICENSEES

4. Disinfection of water in licensable aquatic facility
5. Quality of water in licensable aquatic facility
6. Remedial measures
7. General duties of aquatic facility licensee
8. Maintenance of records

PART 4

REVOCATION

9. Revocation

PART 5

SAVING AND TRANSITIONAL PROVISIONS

Regulation

10. Saving and transitional provisions
The Schedules
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In exercise of the powers conferred by section 111 of the Environmental Public Health Act, the National Environment Agency, with the approval of the Minister for Sustainability and the Environment, makes the following Regulations:

PART 1

PRELIMINARY

Citation and commencement

1. These Regulations are the Environmental Public Health (Licensable Aquatic Facilities) Regulations 2021 and come into operation on 31 August 2021.

Definitions

2. In these Regulations, unless the context otherwise requires —

“aerosol-generating feature”, in relation to a licensable aquatic facility, means a part or component of the licensable aquatic facility that is capable of producing a suspension of fine liquid droplets in air or other type of gas;

“aquatic facility licensee” means a person that holds a valid aquatic facility licence;

“multi-use spa pool” has the meaning given by paragraph 2 of the Environmental Public Health (Licensable Aquatic Facilities) Order 2021 (G.N. No. S 643/2021);

“swimming pool” has the meaning given by paragraph 2 of the Environmental Public Health (Licensable Aquatic Facilities) Order 2021;

“water playground” has the meaning given by paragraph 2 of the Environmental Public Health (Licensable Aquatic Facilities) Order 2021.

PART 2

AQUATIC FACILITY LICENCE APPLICATIONS

Application for or to renew aquatic facility licence

3. An application for or to renew an aquatic facility licence must —
- (a) be made to the Director-General in the form and manner that the Director-General requires;
 - (b) be accompanied by the information and documents that the Director-General requires;
 - (c) be accompanied by the relevant fee specified in the First Schedule; and
 - (d) in the case of an application to renew an aquatic facility licence, be made before the expiry of the aquatic facility licence.

PART 3

DUTIES OF AQUATIC FACILITY LICENSEES

Disinfection of water in licensable aquatic facility

4.—(1) An aquatic facility licensee for a licensable aquatic facility must ensure that the water in the licensable aquatic facility is disinfected —

- (a) where the licensable aquatic facility is located indoors — only with any of the following types of disinfectant:
 - (i) a non-gaseous bromine-based disinfectant;
 - (ii) a non-gaseous chlorine-based disinfectant;
 - (iii) any other chemical approved by the Director-General for the purpose of disinfecting the

water in a licensable aquatic facility that is located indoors; or

(b) where the licensable aquatic facility is located outdoors — only with any of the following types of disinfectant:

(i) a non-gaseous chlorine-based disinfectant;

(ii) any other chemical approved by the Director-General for the purpose of disinfecting the water in a licensable aquatic facility that is located outdoors.

(2) A person that contravenes paragraph (1) shall be guilty of an offence and shall be liable on conviction —

(a) for a first offence, to a fine not exceeding \$5,000; and

(b) for a second or subsequent offence, to a fine not exceeding \$10,000.

(3) In this regulation —

(a) a reference to a licensable aquatic facility that is located indoors is a reference to a licensable aquatic facility that is located within a place that is (except for doors, windows and passageways) completely enclosed, whether permanently or temporarily; and

(b) a reference to a licensable aquatic facility that is located outdoors is a reference to a licensable aquatic facility that is not located indoors.

Quality of water in licensable aquatic facility

5.—(1) An aquatic facility licensee for a licensable aquatic facility that is a multi-use spa pool must —

(a) at least once a day, obtain and test a sample of the water in the licensable aquatic facility so as to ascertain whether the water conforms to the parameter limits relating to “pH value” and “Residual disinfectant” in Part 1 of the Second Schedule;

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- (b) obtain a sample of the water in the licensable aquatic facility and have the sample tested for conformity to each parameter limit specified in Part 1 of the Second Schedule (not less frequently than the minimum testing frequency for that parameter limit or at such other intervals as the Director-General may require), in —
 - (i) a testing laboratory accredited by the Singapore Accreditation Council to conduct the test; or
 - (ii) any other place allowed by the Director-General; and
 - (c) submit to the Director-General, in the manner and within the time that the Director-General requires, a copy of the results of each test undertaken under sub-paragraph (b).
- (2) An aquatic facility licensee for a licensable aquatic facility that is a swimming pool must —
- (a) at least once a day, obtain and test a sample of the water in the licensable aquatic facility so as to ascertain whether the water conforms to the parameter limits relating to “pH value” and “Residual disinfectant” in Part 2 of the Second Schedule;
 - (b) obtain a sample of the water in the licensable aquatic facility and have the sample tested for conformity to each parameter limit specified in Part 2 of the Second Schedule (not less frequently than the minimum testing frequency for that parameter limit or at such other intervals as the Director-General may require), in —
 - (i) a testing laboratory accredited by the Singapore Accreditation Council to conduct the test; or
 - (ii) any other place allowed by the Director-General; and
 - (c) submit to the Director-General, in the manner and within the time that the Director-General requires, a copy of the results of each test undertaken under sub-paragraph (b).
- (3) An aquatic facility licensee for a licensable aquatic facility that is a water playground must —

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- (a) at least once a day, obtain and test a sample of the water in the licensable aquatic facility so as to ascertain whether the water conforms to the parameter limits relating to “pH value” and “Residual disinfectant” in Part 3 of the Second Schedule;
 - (b) obtain a sample of the water in the licensable aquatic facility and have the sample tested for conformity to each parameter limit specified in Part 3 of the Second Schedule (not less frequently than the minimum testing frequency for that parameter limit or at such other intervals as the Director-General may require), in —
 - (i) a testing laboratory accredited by the Singapore Accreditation Council to conduct the test; or
 - (ii) any other place allowed by the Director-General; and
 - (c) submit to the Director-General, in the manner and within the time that the Director-General requires, a copy of the results of each test undertaken under sub-paragraph (b).
- (4) Without limiting paragraphs (1), (2) and (3), an aquatic facility licensee for a licensable aquatic facility that has one or more aerosol-generating features must also —
- (a) obtain a sample of the water in the licensable aquatic facility and have the sample tested for conformity to the parameter limit specified in Part 4 of the Second Schedule (not less frequently than the minimum testing frequency for that parameter limit or at such other intervals as the Director-General may require), in —
 - (i) a testing laboratory accredited by the Singapore Accreditation Council to conduct the test; or
 - (ii) any other place allowed by the Director-General; and
 - (b) submit to the Director-General, in the manner and within the time that the Director-General requires, a copy of the results of each test undertaken under sub-paragraph (a).
- (5) An aquatic facility licensee for a licensable aquatic facility must not use or operate, or allow the use or operation of, the licensable

aquatic facility, unless the water in the licensable aquatic facility conforms to —

- (a) in the case where the licensable aquatic facility is a multi-use spa pool — the parameter limits relating to “pH value” and “Residual disinfectant” in Part 1 of the Second Schedule;
- (b) in the case where the licensable aquatic facility is a swimming pool — the parameter limits relating to “pH value” and “Residual disinfectant” in Part 2 of the Second Schedule; or
- (c) in the case where the licensable aquatic facility is a water playground — the parameter limits relating to “pH value” and “Residual disinfectant” in Part 3 of the Second Schedule.

(6) The aquatic facility licensee must ensure that any kit or equipment used to test any sample of water under paragraph (1)(a), (2)(a) or (3)(a) —

- (a) is able to perform the test;
- (b) is calibrated and accurate; and
- (c) is maintained in good working condition.

(7) A person that contravenes paragraph (1), (2), (3), (4), (5) or (6) shall be guilty of an offence and shall be liable on conviction —

- (a) for a first offence, to a fine not exceeding \$5,000; and
- (b) for a second or subsequent offence, to a fine not exceeding \$10,000.

(8) In this regulation, “minimum testing frequency”, in relation to a parameter limit specified in the second column of any Part of the Second Schedule, means the minimum testing frequency specified for that parameter limit in the third column of that Part of the Second Schedule.

Remedial measures

6.—(1) An aquatic facility licensee for a licensable aquatic facility that becomes aware, or has reason to suspect —

- (a) that the water in the licensable aquatic facility does not conform to any applicable parameter limit; or
- (b) that the water in the licensable aquatic facility is contaminated by any substance which is likely to endanger the health of any person,

must take the following remedial measures:

- (c) within 24 hours of becoming so aware or having reason to so suspect — notify the Director-General (in the form and manner required by the Director-General) of the situation;
- (d) within 3 days after becoming so aware or having reason to so suspect — clean and disinfect the water in the licensable aquatic facility;
- (e) within 24 hours after the water in the licensable aquatic facility is cleaned and disinfected in accordance with sub-paragraph (d) — obtain a sample of the water in the licensable aquatic facility and have the sample tested (so as to ascertain the water's conformity to each applicable parameter limit), in —
 - (i) a testing laboratory accredited by the Singapore Accreditation Council to conduct the test; or
 - (ii) any other place allowed by the Director-General;
- (f) within 7 days after the completion of the test undertaken under sub-paragraph (e) — submit to the Director-General, in the manner that the Director-General requires, a copy of the results of the test.

(2) A person that contravenes paragraph (1)(c), (d), (e) or (f) shall be guilty of an offence and shall be liable on conviction —

- (a) for a first offence, to a fine not exceeding \$5,000; and
- (b) for a second or subsequent offence, to a fine not exceeding \$10,000.

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- (3) In this regulation, “applicable parameter” —
- (a) in relation to the water in any licensable aquatic facility that is a multi-use spa pool — means a parameter limit specified in Part 1 of the Second Schedule;
 - (b) in relation to the water in any licensable aquatic facility that is a swimming pool — means a parameter limit specified in Part 2 of the Second Schedule;
 - (c) in relation to the water in any licensable aquatic facility that is a water playground — means a parameter limit specified in Part 3 of the Second Schedule; and
 - (d) in relation to the water in any licensable aquatic facility that has one or more aerosol-generating features — means a parameter limit specified in Part 4 of the Second Schedule.

General duties of aquatic facility licensee

7.—(1) An aquatic facility licensee for a licensable aquatic facility must ensure that —

- (a) the licensable aquatic facility is supplied only with —
 - (i) water provided by the Public Utilities Board; or
 - (ii) water from any other source approved by the Director-General;
- (b) the licensable aquatic facility is designed and constructed so as to prevent any backflow of water to any pipe conveying potable water to the licensable aquatic facility;
- (c) the water circulation and water purification systems of the licensable aquatic facility are maintained in good working condition and operated to keep the water in the licensable aquatic facility —
 - (i) clean, clear and disinfected; and
 - (ii) free of any scum, debris or floating material; and
- (d) the licensable aquatic facility is —
 - (i) maintained in good working condition; and

- (ii) kept clean and free of algae, dirt, litter, slime and vermin.

(2) A person that contravenes paragraph (1) shall be guilty of an offence and shall be liable on conviction —

- (a) for a first offence, to a fine not exceeding \$5,000; and
- (b) for a second or subsequent offence, to a fine not exceeding \$10,000.

Maintenance of records

8.—(1) An aquatic facility licensee for a licensable aquatic facility must keep and maintain, in such form and manner as the Director-General may require, and for the applicable period mentioned in paragraph (2), complete and accurate records of —

- (a) the results of every test undertaken under regulations 5 and 6;
- (b) every remedial measure taken by the aquatic facility licensee under regulation 6;
- (c) any work carried out by the aquatic facility licensee for the purpose of maintaining the licensable aquatic facility; and
- (d) any other matter that the Director-General may specify in relation to the aquatic facility licensee.

(2) For the purposes of paragraph (1), the applicable period is —

- (a) in the case of records of the results of any test undertaken under regulation 5 or 6 — 12 months after the date of the result of the test;
- (b) in the case of records of any remedial measure taken by the aquatic facility licensee under regulation 6 — 12 months after the date of the taking of the remedial measure;
- (c) in the case of records of any work carried out by the aquatic facility licensee for the purpose of maintaining the licensable aquatic facility under regulation 7(1) — 12 months after the date of the carrying out of the work; and

- (d) in the case of records of any other matter specified by the Director-General in relation to the aquatic facility licensee — 12 months after the creation of the records or such shorter period as the Director-General may specify.

(3) An aquatic facility licensee must make available for inspection by the Director-General or any authorised officer, the records mentioned in paragraph (1), during the applicable period mentioned in paragraph (2), when so requested by the Director-General or any authorised officer.

(4) A person that contravenes paragraph (1) or (3) shall be guilty of an offence and shall be liable on conviction —

- (a) for a first offence, to a fine not exceeding \$5,000; and
(b) for a second or subsequent offence, to a fine not exceeding \$10,000.

PART 4

REVOCATION

Revocation

9. The Environmental Public Health (Swimming Pools) Regulations (Rg 10) are revoked.

PART 5

SAVING AND TRANSITIONAL PROVISIONS

Saving and transitional provisions

10.—(1) To avoid doubt, every licence that is granted under section 99(1) of the Act for the use or operation of a swimming pool before 31 August 2021 and is in force immediately before that date, is to continue in force until the expiry or cancellation of the licence, whichever is earlier.

(2) Any application made under the Environmental Public Health (Swimming Pools) Regulations in force immediately before 31 August 2021 for the grant or renewal of a licence for the use or

operation of any swimming pool, that is still pending on or after that date, is to be treated as if that application were made under regulation 3 of these Regulations.

FIRST SCHEDULE

Regulation 3(c)

FEES

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|--|-------|
| 1. For an application for an aquatic facility licence | \$200 |
| 2. For an application to renew an aquatic facility licence | \$200 |

SECOND SCHEDULE

Regulations 5 and 6

PARAMETER LIMITS FOR WATER IN LICENSABLE AQUATIC FACILITIES

PART 1

WATER IN MULTI-USE SPA POOL

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Parameter</i>	<i>Parameter limit</i>	<i>Minimum testing frequency</i>
1. pH value	<p>(a) where the water is disinfected with a bromine-based disinfectant, the pH value must not be less than 7.2 and must not exceed 8.0; and</p> <p>(b) where the water is disinfected with a chlorine-based disinfectant, the pH value must not be less than 7.2 and must not exceed 7.8</p>	Once a month
2. Residual disinfectant	<p>(a) where the water is disinfected with a bromine-based disinfectant, the amount of total bromine must not be less than 4 parts per million and must not exceed 6 parts per million; and</p> <p>(b) where the water is disinfected with a chlorine-based disinfectant, the amount of free chlorine must not be less than</p>	Once a month

SECOND SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Parameter</i>	<i>Parameter limit</i>	<i>Minimum testing frequency</i>
	3 parts per million and must not exceed 5 parts per million	
3. <i>Escherichia Coli</i> Count	Must be less than 1 colony forming unit per 100 millilitres	Once a month
4. Heterotrophic Plate Count (HPC) at 48h, 35°C	Must not exceed 200 colony forming units per millilitre	Once a month
5. <i>Pseudomonas aeruginosa</i> Count	Must be less than 10 colony forming units per 100 millilitres	Once every 3 months

PART 2

WATER IN SWIMMING POOL

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Parameter</i>	<i>Parameter limit</i>	<i>Minimum testing frequency</i>
1. pH value	<p>(a) where the water is disinfected with a bromine-based disinfectant, the pH value must not be less than 7.2 and must not exceed 8.0; and</p> <p>(b) where the water is disinfected with a chlorine-based disinfectant, the pH value must not be less than 7.2 and must not exceed 7.8</p>	Once a month
2. Residual disinfectant	<p>(a) where the water is disinfected with a bromine-based disinfectant, the amount of total bromine must not be less than 2 parts per million and must not exceed 4 parts per million; and</p> <p>(b) where the water is disinfected with a chlorine-based disinfectant, the amount of free chlorine must not be less than 1 part per million and must not exceed 3 parts per million</p>	Once a month
3. <i>Escherichia Coli</i> Count	Must be less than 1 colony forming unit per 100 millilitres	Once a month

SECOND SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Parameter</i>	<i>Parameter limit</i>	<i>Minimum testing frequency</i>
4. Heterotrophic Plate Count (HPC) at 48h, 35°C	Must not exceed 200 colony forming units per millilitre	Once a month
5. Turbidity	Must not exceed 0.5 Nephelometric Turbidity Units	Once a month

PART 3

WATER IN WATER PLAYGROUND

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Parameter</i>	<i>Parameter limit</i>	<i>Minimum testing frequency</i>
1. pH value	<p>(a) where the water is disinfected with a bromine-based disinfectant, the pH value must not be less than 7.2 and must not exceed 8.0; and</p> <p>(b) where the water is disinfected with a chlorine-based disinfectant, the pH value must not be less than 7.2 and must not exceed 7.8</p>	Once a month
2. Residual disinfectant	<p>(a) where the water is disinfected with a bromine-based disinfectant, the amount of total bromine must not be less than 2 parts per million and must not exceed 4 parts per million; and</p> <p>(b) where the water is disinfected with a chlorine-based disinfectant, the amount of free chlorine must not be less than 1 part per million and must not exceed 3 parts per million</p>	Once a month
3. <i>Escherichia Coli</i> Count	Must be less than 1 colony forming unit per 100 millilitres	Once a month
4. Heterotrophic Plate Count (HPC) at 48h, 35°C	Must not exceed 200 colony forming units per millilitre	Once a month

SECOND SCHEDULE — *continued*

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Parameter</i>	<i>Parameter limit</i>	<i>Minimum testing frequency</i>
5. <i>Pseudomonas aeruginosa</i> Count	Must be less than 10 colony forming units per 100 millilitres	Once every 3 months
6. Turbidity	Must not exceed 0.5 Nephelometric Turbidity Units	Once a month

PART 4

WATER IN LICENSABLE AQUATIC FACILITY WITH
AEROSOL-GENERATING FEATURES

<i>First column</i>	<i>Second column</i>	<i>Third column</i>
<i>Parameter</i>	<i>Parameter limit</i>	<i>Minimum testing frequency</i>
1. <i>Legionella</i> Bacteria Count	Must be less than 1 colony forming unit per 100 millilitres	Once every 3 months

Made on 23 August 2021.

LEE CHUAN SENG
Chairman,
National Environment Agency,
Singapore.

[C030/01/101; NEA/LD/176; AG/LEGIS/SL/95/2020/17 Vol. 1]

(To be presented to Parliament under section 111(4) of the Environmental Public Health Act).