

**REGULATIONS PERTAINING TO SANITARY STANDARDS FOR  
MANUFACTURE, PROCESSING, STORAGE AND  
TRANSPORTATION OF ICE**

[R23-1-ICE]

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Health

June 1966

*As Amended:*

**January 2002 (re-filing in accordance with  
the provisions of section 42-35-4.1 of the  
Rhode Island General Laws, as amended)**

**Authority:** Sections 1, 17, 18 and 26 of Chapter 1, Title 23 of the General Laws of 1956, as amended.

## **R23-1-11 DEFINITIONS**

The following definitions shall apply in the interpretation of this standard:

Approved. The term approved shall mean acceptable to the director based on his determination as to conformance with appropriate standards and good public health practice.

Director. The term director shall mean the Director of Health of the State of Rhode Island or his designated representative.

Easily Cleanable. The term easily cleanable shall mean readily accessible and of such material and finish, and so fabricated that residue may be completely removed by normal cleaning methods.

Employee. An employee shall mean any person working in an ice plant who transports ice or ice containers, who engages in ice manufacture, processing, packaging, storage, or distribution, or who comes into contact with any ice equipment.

Equipment. Equipment shall mean all grinders, crushers, chippers, shavers, scorers, saws, cubers, can fillers, core fillers, drop tubes, needles, core sucking devices, conveyors and similar items used in ice plants.

Ice. Ice shall mean the product, in any form obtained as a result of freezing water by mechanical or artificial means.

Ice Plant. The term ice plant shall mean any commercial establishment, together with the necessary appurtenances, in which ice is manufactured or processed, and stored, packaged, or distributed or offered for sale for human consumption, or for use in such a manner that it will come into direct contact with food equipment or utensils, or with food or beverage intended for human consumption. This standard is not intended to apply to establishments subject to other specific sanitary standards, provided such sanitary standards are at least equal to this standard.

Person. The term person shall mean an individual, or a firm, partnership, company, corporation, trustee, association, or any public or private entity.

Processing. Processing shall mean grinding, crushing, flaking, cubing, or any other operation which changes the physical characteristics of ice.

Single-Service Articles. The term single-service articles shall mean those articles which are intended by the manufacturers, and generally recognized by the public, as being for one usage only, then to be discarded.

Utensil. A utensil shall mean any multiuse cans, buckets, tubs, pails, vats, containers, covers, tongs, picks, and similar items used in the manufacture and handling of ice.

### **R23-1-I2 ICE QUALITY**

Ice intended for human consumption or to be used in direct contact with water, food, food equipment, or food utensils, shall meet the bacteriological, chemical, and physical standards of quality of applicable state laws and regulations, or in the absence thereof, the Public Health Service Drinking Water Standards, 1962 (Publication No. 956).

### **R23-1-I3 WATER SUPPLY AND TREATMENT**

- I3.1 All water used in ice plants, including that used in preparing brine solutions, shall be of a safe, sanitary quality and from an approved public or private water supply system which is constructed, protected, operated, and maintained in conformance with applicable state laws and regulations, or in the absence thereof, the Public Health Service Drinking Water Standards, 1962 (Publication No. 956).
- I3.2 Only potable water shall be used in sprays and in filling dipping wells for the removal of ice cakes from the ice cans or tanks. Ice shall not come into direct contact with water in dipping wells.
- I3.3 If water is treated at the ice plant, the treatment and facilities shall be approved. Use of chemicals or additives shall be in accordance with regulations promulgated under the Food Additives Amendment to the Federal Food, Drug, and Cosmetic Act.
- I3.4 All water filters, settling tanks, and other treatment facilities, shall be cleaned as often as necessary to keep them operational and in a clean and sanitary condition. Adequate bacteriological, chemical, and physical tests shall be made to assure potability of the water used in the manufacture of ice; and the records of these tests shall be maintained when such facilities are provided. Storage-water tanks shall be covered.
- I3.5 If specifically approved by the director, a non-potable water supply may be permitted within the establishment for purposes of fire protection and the cooling of refrigeration equipment.

### **R23-1-I4 SEWAGE DISPOSAL**

All sewage and waste water shall be disposed of by means of a public sewerage system or an approved sewage-disposal system which is constructed, operated and maintained in conformance with applicable state laws and regulations.

### **R23-1-I5 PLUMBING**

- I5.1 All plumbing shall be sized, installed, and maintained in accordance with applicable state plumbing laws and regulations.
- I5.2 The potable water supply piping shall not be connected with any nonpotable water-supply system

whereby the nonpotable water can be drawn or discharged into the potable water supply system. The piping of any nonpotable water system shall be adequately and durably identified, such as by distinctive colored paint, so that it is readily distinguished from piping which carries potable water; and nonpotable water piping shall not be connected to equipment, except as specified in subsection I3.5, or have outlets in the brine circulation tanks. Fire protection outlets shall be so designed or protected as to discourage their use for any other purpose.

- I5.3 The potable-water system shall be installed in such a manner as to preclude the possibility of backflow into the system.
- I5.4 Drain lines from equipment shall not discharge waste water in such a manner as to permit the flooding of floors or the flowing of water across working or walking areas, or in difficult to clean areas, or otherwise create a nuisance.
- I5.5 Soil, waste or drain pipes shall be so located, installed and maintained as not to constitute a source of contamination for ice, equipment, or utensils, or to create an insanitary condition or nuisance.

#### **R23-1-I6 AIR FOR AGITATION**

- I6.1 Air used for water agitation shall be filtered or otherwise treated to render it free of dust, dirt, insects, and extraneous material. Air intakes shall be located and maintained in an approved manner. Filters shall be located upstream from the compressor and shall be easily removable for cleaning or replacement.
- I6.2 The blower or compressor for supplying air for water agitation shall be designed so it will deliver oil-free air. Oil-free air may be produced by one of the following methods or its equivalent.
  - a. Use of carbon ring piston compressor
  - b. Use of an oil-lubricated compressor with effective provision for removal of any oil vapor.
  - c. High-pressure water-lubricated or non-lubricated blowers.

#### **R23-1-I7 SANITARY FACILITIES AND OPERATION**

- I7.1 Ice manufacturing, processing, packaging, and storage operations shall be conducted in a building or structure that is enclosed and maintained in a sanitary condition. Such building or structure shall protect the ice, equipment, and utensils from dust, dirt, rodents, insects, and other contaminating sources. Ice for human consumption shall not be processed or packaged on open platforms or on trucks or other vehicles used for delivery.
- I7.2 The floors, walls and ceilings of all rooms in which ice is manufactured, processed, packaged, and stored shall be of such material, and so constructed as to be maintained in a clean, sanitary condition. They shall be kept clean and in good repair. Unless otherwise approved by the director, such rooms shall be used for no purpose or operation other than those normally

associated with the manufacture, processing, packaging, and storage of ice and the production of refrigeration.

- I7.3 Ice-contact surfaces, including loading platforms, conveyors, and chutes, shall be easily cleanable and shall be kept clean and in good repair. Loading platforms, conveyors, chutes, and other contact surfaces which are not maintained at or below freezing shall be washed as often as necessary to keep them clean.
- I7.4 At least 10 foot-candles of light shall be required on surfaces in all rooms or areas in which ice is manufactured, processed, or packaged. At least 10 foot-candles of light shall also be required in utensil washing areas, toilet rooms, and hand-washing areas. Storage rooms shall have at least 5 foot-candles of light as measured 30 inches from the floor. Sources of artificial light shall be provided and used to the extent necessary to provide the required amount of light on those surfaces and in those areas when in use and when being cleaned.
- I7.5 All equipment and utensils used in ice plants shall be of easily cleanable construction and shall be kept clean, in good repair, and shall be handled and stored in a sanitary manner. Materials used as ice-contact surfaces shall, under use conditions, be smooth, nontoxic, and relatively nonabsorbent. Ice tanks and cans shall be kept in a leakproof condition and the inner surface of such containers shall be free of corrosion.
- I7.6 Canvas containers shall not be used unless provided with a sanitary single-service liner so as to completely protect the ice.
- I7.7 Single-service articles shall be stored, dispensed, and handled in a sanitary manner, and shall be used only once.
- I7.8 Freezing tank covers shall be so designed and of such material as to protect the ice containers from splash, drip and other contamination; shall be easily cleanable; and shall be kept clean and in good repair. Such covers shall be equipped with rings or similar devices, thereby minimizing splintering of covers when hooks are used for pulling. Can or tank covers and the ledges and sides of the tank upon which the cover rests, shall be cleaned as often as necessary to keep them in a sanitary condition and in a manner satisfactory to the director.
- I7.9 All portable can or tank fillers, core suckers, needles, core fillers, drop tubes, pipes, tongs, picks, and covers shall be maintained in a clean sanitary condition. When not in use, they shall be stored in clean cabinets, or other suitable enclosures which protect them from contamination. If such equipment or utensils contact the floor or are otherwise subjected to contamination, they shall be thoroughly cleaned before reuse.
- I7.10 No person shall enter the tank room or any room or area where ice contacts a walking surface, unless he wears clean suitable boots or shoe coverings. Such boots or shoe coverings shall be removed when the person leaves such room or area; provided, that if boots or shoe coverings are not removed, they shall be thoroughly washed in an approved solution before reentering such rooms or areas. Street shoes without suitable coverings shall not be used in these areas.
- I7.11 Air pipes, and coring or sucking (vacuum) devices shall be used as needed to produce a product free of rust or other foreign materials.

I7.12 All ice blocks shall be thoroughly washed with potable water as they come to the delivering platform prior to distribution.

I7.13 Ice, while being manufactured, processed, packaged, and stored shall be protected from contamination. Hands shall not come into direct contact with the ice when other methods of handling can be used.

#### **R23-1-I8 TRANSPORTATION OF ICE**

I8.1 Ice, while being transported or delivered, shall be protected from contamination from dust, dirt, or any other source. The ice compartment of vehicles used in transporting or delivering ice shall be of cleanable construction and shall be kept clean and in good repair.

I8.2 Vehicles used for transporting or delivering unpackaged ice shall be of closed construction with tight-fitting covered bodies, or if of open construction, shall have tight floors and sides and shall be equipped with clean tarpaulins covering the entire load and reaching all the way to the floor in back of the load. If tarpaulins are used, they shall be thoroughly cleaned after each usage.

I8.3 All vehicles hauling unpackaged ice shall be thoroughly washed immediately prior to loading with ice.

#### **R23-1-I9 TOILET FACILITIES**

I9.1 Toilet facilities shall be adequate and conveniently located, and shall be accessible to the employees at all times.

I9.2 Toilet rooms shall be completely enclosed, and shall have tight-fitting, self-closing doors. Such doors shall not be left open except during cleaning or maintenance. If vestibules are provided, they shall be kept in a clean condition and in good repair.

I9.3 Toilet facilities, including the toilet room and fixtures, shall be kept clean and in good repair, free from flies and objectionable odors, and shall be vented to the outside air.

I9.4 A supply of toilet tissue shall be provided at each toilet at all times.

I9.5 Easily cleanable receptacles shall be provided for waste materials.

#### **R23-1-I10 HAND-WASHING FACILITIES**

I10.1 Lavatories shall be located within or immediately adjacent to all toilet rooms.

I10.2 Lavatories shall be adequate in size and number and shall be so located as to permit convenient and expeditious use by all employees.

I10.3 Each lavatory shall be provided with hot and cold or tempered running water. Where hot and cold running water is provided, a mixing valve or combination faucet is recommended. Steam-mixing valves are prohibited.

I10.4 An adequate supply of hand-cleansing soap or detergent shall be available at each lavatory. An adequate supply of sanitary towels, or an approved hand-drying device, shall be available and conveniently located near the lavatory. Common towels are prohibited. Where disposable towels are used, waste receptacles shall be located conveniently near the hand-washing facilities.

I10.5 Lavatories, soap dispensers, hand-drying devices, and all other components of the hand-washing facilities shall be kept clean and in good repair.

### **R23-1-III HOUSEKEEPING**

III.1 All parts of the establishment and its premises shall be kept neat, clean, and free of litter and debris.

III.2 Effective control measures shall be utilized to eliminate rodents, flies or other vermin from the premises.

III.3 Insecticides and rodenticides shall not be used in any way as to contaminate ice or ice-contact surfaces, nor to constitute a hazard to employees or customers.

### **R23-1-I12 PERSONNEL**

I12.1 No person while affected with any disease in a communicable form, or while a carrier of such disease, shall work in any area of an ice plant in any capacity in which there is a likelihood of such person contaminating water, ice, or ice-contact surfaces with pathogenic organisms, or transmitting disease to other individuals.

I12.2 All employees shall wear clean outer garments, maintain a high degree of personal cleanliness, and conform to good hygienic practices while on duty. They shall wash their hands thoroughly with soap and warm water in an approved hand-washing facility before starting work and as often as may be necessary to remove soil and contamination. No employee shall resume work after visiting the toilet room without having washed his hands.

I12.3 Employees shall not use tobacco in any form in any room used for the manufacture, processing, packaging, or storage of ice.

I12.4 Unauthorized persons shall not be permitted in any room where ice is manufactured, processed, packaged, or stored.