

Staffing Requirements for Non risk Assessed and Risk assessed Refrigeration Plants (operational vs non operational)

Due to the current situation that has caused closure of arenas throughout the province of BC, we are aware of some uncertainty and have received requests for clarification regarding options for staffing required for refrigeration plants. The RFABC has been in consultation with Technical Safety BC and it is our intention that this message will provide clarification for asset owners to make informed decisions on what options are best suited for their plants. However, we recommend that best practice is to discuss with your refrigeration contractor, chief engineer and local safety inspector on what may be the best for your specific plant and situation whether to be operational or non-operational.

Refrigeration Plants are regulated in accordance with the Safety Standards Act and the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation. Ice arenas are considered public occupancy premises, and therefore fall into either of two (2) plant classifications, continuous supervision or risk assessed status.

Continuous Supervision plants requires *“the person in charge of the plant to be present at all times in the plant boiler room, refrigeration machinery room, engine turbine room or in the immediate vicinity within the plant premises while the plant is in operation”*.

Risk Assessed Status Plants, as a minimum while the plant is in operation, requires *“a power engineer with the appropriate certificate of qualification who:*

(a) Is on the premises of the plant not less than 7 hours per day or such greater time as may be required by a provincial safety manager, and

(b) Inspects the plant in accordance with conditions established by a provincial safety manager.

During periods when the refrigeration plant is in operation, staffing requirements are different as described previously.

However, the staffing levels are the same for both classifications when **the plant is considered non-operational and supervision is not required by a certified individual.**

Safety Order SO-BP 2017-02 defines as follows: *“a plant is deemed to be in operation if any part of the refrigeration system contains ammonia at a pressure greater than 15 psig, unless the system ammonia charge is pumped down and contained in a liquid receiver, or parts of a system designed for that purpose, and isolated to prevent the circulation of ammonia.*

Liquid receivers or parts of a system that will be utilized to store the refrigerant charge, shall be capable of containing the refrigerant charge without the liquid ammonia occupying more than 90% of the volume when the temperature of the refrigerant is at 32 degrees Celsius (90 degrees Fahrenheit).

The liquid receiver shall be provided with pressure relief devices(s) and any part of a system that contains liquid refrigerant (where the pressure can rise from hydrostatic expansion due to temperature rise and isolation valves being closed) shall be provided with overpressure protection in accordance with CSA B52 Mechanical Refrigeration Code”.

TSBC has agreed to allow RFABC to direct your refrigeration plant issues to:

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