

For Information Only

Sudbury Community Arena - Dehumidification

Presented To: Community Services
Committee

Presented: Monday, Oct 21, 2013

Report Date Friday, Oct 11, 2013

Type: Managers' Reports

Recommendation

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Background

On Friday, September 20th, 2013, the Ontario Hockey League (OHL) game scheduled at the Sudbury Community Arena was canceled due to extremely high humidity. The outside temperature resulted in a humidity level of 100%. As the Sudbury Community Arena is not equipped with a dehumidification system, there was "fog" on the ice surface and condensation occurring inside the arena, leading to a cancellation of the game due to safety concerns.

The facility has experienced humidity issues in previous years particularly during the fall and spring seasons. In previous years, during exhibition Sudbury Wolves hockey games, humidity issues have resulted in fans being relocated to elevated seats to allow for unobstructed views over the "fogged" glass. Attendance is generally less at exhibition games allowing for ease of movement of fans. Additional fans at regular season games also produce more heat in the facility exacerbating the issue. Recent climate trends in the past number of years have resulted in additional pressures to operate indoor ice facilities which are not equipped with dehumidification equipment.

Engineer's Recommendation

A professional engineer was consulted in order to review the issue and to discuss options. In order to eliminate future humidity problems at the Arena, the engineer recommended that the City purchase and install two dehumidifiers. Based on the seating capacity at the Sudbury Community Arena, the engineer recommended that the facility would require two 10,000 cubic feet per minute (cfm), gas fired dehumidifiers (Munters A30-1500G). The recommended units were recently installed at the Windsor Arena and old Maple Leaf Gardens in Toronto.

The cost to purchase the two units is estimated at \$350,000. The total project cost including installation, engineering and contingency is estimated between \$750,000 and \$850,000. The dehumidifiers, once

Signed By

Report Prepared By

Ray Mensour
Manager of Arenas
Digitally Signed Oct 15, 13

Division Review

Real Carre
Director of Leisure Services
Digitally Signed Oct 15, 13

Recommended by the Department

Catherine Matheson
General Manager of Community
Development
Digitally Signed Oct 15, 13

Recommended by the C.A.O.

Doug Nadorozny
Chief Administrative Officer
Digitally Signed Oct 15, 13

installed, may be relocated to a new facility in the future.

Other Short-Term Responses

The engineer provided options for reducing the humidity levels as alternatives to purchasing permanent dehumidification units:

Building Temperature

Pre-cooling the building will help to remove moisture from the air. This recommendation was implemented prior to Friday, September 20th game, however it was not effective due to the extreme high humidity level outside of the building.

Portable Commercial Dehumidification Equipment

Installing temporary portable industrial dehumidifiers to remove moisture could also be considered. Specialized suppliers were contacted to determine availability, cost and to identify the potential requirement for building retrofits to accommodate portable equipment. A quote for rental equipment (5 units, 5000 cfm/unit) was obtained. Weekly rental costs are approximately \$30,000, the monthly rate is approximately \$50,000. Costs are inclusive of delivery, set-up and operation of the units for the rental period.

Summary

Due to projected high humidity levels on Friday, October 4th, 2013, on an emergency basis, portable commercial dehumidifiers were rented to ensure that upcoming OHL games are not affected by potential humidity issues in the short term. The quoted cost for the rental is \$50,000 for the month. Of special concern is the upcoming spring season, when humidity could again become an issue (approximately 8 weeks of potential playoffs in April - May). As cited below, the requirements of the purchasing by-law have been met.

The following information from the Purchasing By-law has been included from Supplies and Services:

As this is being deemed an emergency purchase the by-law requires the following:

22.-(1) Where an Emergency exists requiring the immediate procurement of Goods, Services or Construction, a GM or the Agent may purchase the required Goods Services or Construction by the most expedient and economical means, notwithstanding any other provision of this By-Law. As soon as practicable thereafter, the Agent shall comply with Section 26 of this By-law.

(2) For all Emergency purchases made by a GM, the GM shall as soon after the purchases as reasonably possible, notify the Agent with a written report detailing the circumstances of the Emergency. A report to Council shall be made by the General Manager or the Agent in all circumstances where the Emergency purchases exceeds \$35K.

Section 26 provides that a PO needs to be issued by the Agent incorporating the relevant terms and conditions.