



SAFETY CODES COUNCIL

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COUNCIL ORDER No. 0015414

ORDER

**BEFORE THE BUILDING TECHNICAL COUNCIL
On April 5, 2012**

IN THE MATTER OF the Safety Codes Act, Revised Statutes of Alberta 2000, Chapter S-1.

AND IN THE MATTER OF the Order dated February 3, 2012 issued by Alberta Municipal Affairs (Respondent) against a Manufacturing Company (Appellant).

UPON REVIEWING the Order **AND UPON HEARING** the Appellant and the Respondent; **THIS COUNCIL ORDERS THAT** the Order is **CONFIRMED**.

Issue:

1. The Appeal concerns fire alarm and smoke alarm systems for Part 10 Industrial Relocatable Accommodation (Part 10 modules).

The Record:

2. The Appeal Panel considered, or had available for reference, the following documentation:
 - a) A letter dated March 19, 2012, from the Safety Codes Council to the Appellant providing notice of the appeal hearing.
 - b) A letter dated February 28, 2012, from the Building Technical Council to the Appellant, granting a stay of the order.
 - c) A letter dated February 21, 2012, from the Coordinator of Appeals to the Appellant acknowledging receipt of the Appellant's notice of appeal and request for a stay of order.
 - d) A letter dated February 16, 2012, from the Appellant requesting a stay of the order.

- e) A letter dated February 14, 2012, from the Appellant providing notice of appeal, with a copy of a request for variance dated February 6, 2012, and supporting documentation for the variance request.
- f) A copy of the Respondent's order dated February 3, 2012.
- g) A submission from the Respondent titled, "Total Modular Appeal April 5, 2012".
- h) "Exhibit A – Appellant" – Excerpts from Division B of the Alberta Building Code 2006, articles 3.2.4.11 and 3.2.4.20 and table 3.1.2.1.

Position of the Parties

Appellant

3. The Appellant's position is that:

- a) The Appellant requests a variance to allow for an alternative smoke detection/fire alarm system installed in Part 10 relocatable industrial accommodation at an industrial site in another province.
- b) The equipment proposed as an alternative solution meets the intent of the Alberta Building Code 2006 and is an improvement over the CAN/ULC-S531.

Respondent

4. The Respondent's position is that:

- a) All Part 10 modules manufactured in Alberta containing sleeping rooms are required to have a smoke alarm conforming to CAN/ULC-S531 installed on the ceiling of each sleeping room.
- b) A redundancy is built into the Alberta Building Code 2006 to provide enhanced safety, particularly as a Part 10 building expands. Smoke alarms and fire alarms are separate systems and are usually independent. If one alarm fails the other alarm can provide warning to the occupant. The Appellant's proposed variance does not provide this redundancy.
- c) The design of the Appellant's proposed variance is more complicated and is subject to error, tampering and programming such as a two-stage system or a delay. The proposal provides a smoke detector sending a signal to a panel and then the panel sending a signal to a separate audible alarm. A smoke alarm has a smoke detector and alarm device built into a simple, single, certified product. When smoke is detected in the room where the smoke alarm is installed, the alarm rings immediately in the room where the smoke alarm is installed.
- d) Acceptable solutions are required to be registered prior to starting work and apply only to specific modules identified by a serial number.

Findings of Fact:

5. The applicable code is the Alberta Building Code 2006.

6. The Alberta Building Code 2006 provides:

Division A

1.2.1.1. Compliance with this Code

1) Compliance with this Code shall be achieved by

a) complying with the applicable acceptable solutions in division B (see Appendix A), or

b) using alternative solutions that will achieve at least the minimum level of performance required by Division B in the areas defined by the objectives and functional statements attributed to the applicable acceptable solutions. (see Appendix A)

2.2.1.1.

1) The objectives of this Code are as follows (see Appendix A):

OS1 Fire Safety

An objective of this Code is to limit the probability that, as a result of

a) The design of construction of the building or facility,

b) Activities related to the construction, use or demolition of the building or facility,

c) The condition of specific elements of the building or facility,

d) The design or construction of specific elements of the facility related to certain hazards, or

e) Inadequate built-in protective measures for the current or intended use of the building or facility,

a person in or adjacent to the building or facility will be exposed to an unacceptable risk of injury due to fire. The risks of injury due to fire addressed in the Code are those caused by – OS1.5 – person being delayed in or impeded from moving to a safe place during a fire emergency.

3.2.1.1. Functional Statements

1) the objectives of this Code are achieved by measures, such as those described in the acceptable solutions in division B, that are intended to allow the building or its elements to perform the following functions (see appendix A):

F11 – To facilitate the timely movement of persons to a safe place in an emergency.

F81 – To minimize the risk of malfunction, interference, damage, tampering, lack of use or misuse.

4.2.8.1. Attribution to Acceptable solutions

1) For the purposes of compliance with this Code as required in Clause 1.2.1.1.(1)(b), the objectives and functional statements attributed to the acceptable solutions in Part 10 of Division B shall be the objectives and functional statements listed in Table 4.2.8.1. (See A-4.1.2.1.(1) in Appendix A.)

Table 4.2.8.1. Objectives and Functional Statements

10.6.3.5. Smoke Alarms	
Acceptable Solutions	Objectives and Functional Statements
(1)	F11, F81-OS1.5

Division B

10.6.3.1. Fire Alarm Systems

1) A fire alarm system shall be installed in accordance with CAN/ULC-S524, “Installation of Fire Alarm Systems,” in a building

- a) providing sleeping accommodation for more than 10 persons,
- b) providing dining facilities for more than 100 persons,
- c) providing recreational facilities for more than 150 persons, or
- d) if required by other Parts of this Code, except as varied by Clauses (a), (b) and (c).

10.6.3.5. Smoke Alarms

1) A smoke alarm conforming to CAN/ULC-S531, “Smoke Alarms,” shall be installed on the ceiling of every room providing sleeping accommodation.

2) The smoke alarm in Sentence (1)

- a) shall be installed by permanent connection to an electrical circuit,
- b) shall be equipped to show that it is in operating condition,
- c) shall have no disconnect switches between the overcurrent device and the smoke alarm, and
- d) is permitted to be tied into the building fire alarm system.

10.8.1.1. Attribution to Acceptable Solutions

1) For the purposes of compliance with this Code as required in clause 1.2.1.1.(1)(b) of Division A, the objectives and functional statements attributed to the acceptable solutions in this Part shall be the objectives and functional statements listed in subsection 4.2.8. of division A. (See A-4.1.2.1.(1) in Appendix A of Division A.)

- 7. The building in question is a Part 10 Relocatable Industrial Accommodation providing accommodation for an industrial work force living and working in a temporary location at a uranium mining site.
- 8. The building consists of seven wings with eight modules per wing. Of the eight modules, one module provides washroom facilities and the other seven modules provide either five or seven sleeping rooms. Each sleeping room has one bed. Each wing has a maximum occupancy of either 35 or 49 sleeping rooms.
- 9. The modules for this building were manufactured in Alberta for use in another province. In presentation the Appellant indicated that the Appellant’s client requested the modules to be labelled with Alberta Building Code 2006 Division B Part 10 labels. (Part 10 certification labels)
- 10. Sometime prior to February 3, 2012, the Appellant manufactured modules and installed a fire alarm system non-compliant with the Alberta Building Code 2006. The Appellant’s fire alarm

system did not include a smoke alarm, conforming to CAN/ULC-S351, installed on the ceiling of every sleeping room.

11. In cross-examination the Appellant indicated that the modules subject to this appeal were labelled with Part 10 certification labels.
12. On February 3, 2012, the Respondent issued an order to the Appellant to install compliant smoke alarms in all sleeping rooms of modules under their control and to notify all previous buyers of modules with the non-compliant fire alarm system, of the deficiency and to offer to install the smoke alarms at the module's location.
(The Record Item 2(f))
13. On February 6, 2012, the Appellant submitted a Request for Specific Variance to the Respondent. The Appellant requested a variance to allow the installed fire alarm system to remain in the Part 10 modules with the specific serial numbers. The Respondent denied the Appellant's request for a variance. (The Record Item 2(e))
14. The Appellant's variance request as submitted did not address the objectives and functional statements required by the Alberta Building Code 2006. An alternative solution must achieve at least the minimum level of performance required by Division B in the areas defined by the objectives and functional statements attributed to the applicable acceptable solutions.
15. In addition to the requirement for a smoke alarm conforming to CAN/ULC-S351, compliance with the Alberta Building Code 2006 also requires that when providing sleeping accommodations for more than 10 persons, a Part 10 Relocatable Industrial Accommodation is required to have an installed fire alarm system conforming to CAN/ULC-S524.
16. In presentation, the Appellant submitted article 3.2.4.11. of Division B of the Alberta Building Code 2006 as argument that in some occupancies smoke detectors are installed in each sleeping room and each corridor. The article submitted indicates the requirements for smoke detectors in sleeping rooms of a care and detention facility.

Reasons for Decision:

17. An objective of the Code is to limit the probability a person in or adjacent to a building or facility will be exposed to an unacceptable risk of injury due to fire.
18. Part 10 modules are temporary relocatable structures that may be reconfigured into different building designs. A building may consist of one module only and as such each module is required to be compliant with the Alberta Building Code 2006. A label on a Part 10 module indicates compliance.
19. The smoke detection/fire alarm system installed in the modules and proposed by the appellant does not comply with the applicable acceptable solutions in division B. Compliance with the Alberta Building Code 2006 requires that Part 10 relocatable industrial accommodations

providing sleeping accommodation for more than 10 persons have a fire alarm system installed in accordance with CAN/ULC-S524.

20. The request for variance submitted to the Respondent on February 6, 2012, does not address the criteria for objectives and functional statements.
21. The Appellant did not present sufficient evidence to satisfy the panel that the proposed alternative solution will achieve at least the minimum level of performance required by Alberta Building Codes 2006 in the areas defined by the objectives and functional statements attributed to the applicable acceptable solutions.
22. The Appellant's submission of article 3.2.4.11. Division B of the Alberta Building Code 2006 does not apply to Part 10 modules. This article pertains to a building classified as Group B major occupancy for care or detention occupancies. The smoke detection and smoke alarm requirements for a care and detention occupancy are not an acceptable solution for Part 10 Relocatable Industrial Accommodation. A care or detention facility is monitored 24 hours per day, seven days per week, by staff trained to respond to emergencies. The building requirements for a care and detention occupancy are different than an industrial accommodation providing accommodation for an industrial work force living and working in a temporary location.
23. The Order as written provides a reasonable amount of time for the Appellant to comply.

Dated at Edmonton, Alberta this 19th day of April 2012

Chair, Building Technical Council Appeal Panel