

**BUILDING MATERIALS EVALUATION COMMISSION  
(BMEC)  
AUTHORIZATION REPORT**

**DATE OF AUTHORIZATION  
BMEC AUTHORIZATION  
BMEC APPLICATION**

**MARCH 25, 2004  
BMEC # 04-03-295  
#A2003-15**

**COVER-ALL BUILDING SYSTEMS  
Cover-All Membranes**

**1. Applicant**

Cover-All Building Systems  
3815 Wanuskewin Road  
Saskatoon, Saskatchewan  
S7P 1A4

Tel: (306) 657-2888  
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**2. Manufacturing Facilities**

Cover-All Building Systems  
3815 Wanuskewin Road  
Saskatoon, Saskatchewan  
S7P 1A4

**3. Description**

The Cover-All Building System is a non pressurized building wherein the structure is composed of a steel framework to support the Cover-All Membranes, which are tensioned to provide a weather barrier.

The Cover-All Building System consists of a Vipersteel® clear span truss system, series TAS, IAS, LBS and TBS, covered with the Cover-All Membrane, a flexible roof covering of either a polyolefin, which has the product name Duraweave® FR, or a 1.09 mm (43 mil) Poly Vinyl Chloride (PVC).

The Cover-All Membranes meet both CAN/ULC-S109-M87 "Standard of Flame Tests of Flame-Resistant Fabrics and Films"; and NFPA 701-1997 "Method of Fire Test for Flame-Resistant Textiles and Films" standards.

**4. Authorization requested**

The Applicant sought a Building Materials Evaluation Commission (BMEC) Authorization for the Cover-All Membranes for use as a roof covering, only when used in conjunction with a Cover-All Building System, as defined in this Authorization, in lieu of the requirements of Sentence 3.1.15.1.(1). "Roof Covering Classification" of the 1997 Ontario Building Code, as amended or remade from time to time (OBC).

## 5. Assessment

Reports and assessments provided by the Applicant show that if the Cover-All Membranes are designed, performance tested and installed in accordance with the manufacturer's instructions and limitations, and the specific terms and conditions stated in this Authorization, the level of performance required by the OBC will be provided.

Reports submitted, and reviewed but not limited to:

1. Cover-All Building Systems Detail Drawings, June 26, 2003 "Rated Exterior Wall Details."
2. 2000 International Building Code, Chapter 31 "Special Construction" Section 3101.
3. Building Officials and Code Administrator International, Inc. Copyright 1998, Section 3103.0 "Membrane Structures."
4. Standard Building Code 1999, Chapter 31 "Special Construction."
5. 1997 Uniform Building Code Appendix Chapter 31, Division 11 "Membrane Structures."
6. Letter of Guidance, Saskatchewan Municipal Affairs and Housing, February 15, 2002.
7. Manufacturer Information:
  - (a) Capital District Salt
  - (b) Empire Polo And Event Centre
  - (c) Kingdom Projects Inc.
  - (d) New Era Technologies
  - (e) Rocky Mountain Log Homes
  - (f) Seward's Ship's Drydock
  - (g) CENEC VCL
  - (h) Crescent School
  - (i) Cover-All Building Systems Manufacturing Facility
8. Factory Mutual Research of America.
9. Ferrari, March 2002, "Full Scale Fire Test on Composite Membrane for Textiles Structures", SP Method 3305, Swedish National Testing Institute.
10. Cover-All Building Systems Report on Energy Compliance, July 15, 2003.
11. Cover-All Building Systems Membrane Specifications, July 15, 2003.

12. Cover-All Building Systems Steel Specification, July 15, 2003.
13. Canadian Welding Bureau Letter of Validation.
14. Cover-All Building Systems Series Structural Evaluations, July 15, 2003.
15. Cover-All Building Systems Series Building Details, July 15, 2003.
16. Cover-All Building Systems Installation Manuals, revised February 2004.
17. Cover-All Building Systems Owner Maintenance and Conditions Warranty Manual, dated 07/03, revised February 2004.
18. Cover-All Building Systems Quality Management System Quality Manual, revised July 7, 2003.
19. BMEC Presentation by Cover-All Building Systems, July 31, 2003.
20. Manufacturer Information "Commercial Building Solutions", Cover-All Building Systems.
21. Manufacturer Information "The Industrial Building Solution", Cover-All Building Systems.
22. Manufacturer Information "The Tool of Choice for Road Safety: Cover-All Salt and Sand Storage Facilities", Cover-All Building Systems.
23. Correspondence to the BMEC dated July 15, 2003.
24. "Space Heating and Lighting Performance of a Titan Building", SRC Publication No. 11664-1C03, July 2003.
25. Intertek "Membrane - Covered Frame Structure Titan / Pinnacle Hurricane Testing", January 26, 2004.
26. "Ontario Snow Accumulation Study on Fabric Membrane Cover", Cover-All Building Systems, February 2004.

## **6. Authorization**

The Cover-All Membranes are authorized for use as a roof covering, only when used in conjunction with a Cover-All Building System, in lieu of the requirements of Sentence 3.1.15.1.(1) "Roof Covering Classification" of the OBC;

all other requirements pertaining to the installation and construction are subject to the requirements of the OBC and subject to the following terms and conditions:

This Authorization is not intended to be used as an equivalent to CAN/ULC-S107-M87 where roof coverings are permitted to be used in the construction of traditional roofing systems Class A, B, and C as determined by CAN/ULC-S107-M87.

**A. Specific Terms & Conditions**

1. This Authorization is valid only for the use of Duraweave® FR and 1.09 mm (43 mil) PVC (the "Cover-All Membranes"), when they are used in conjunction with a Cover-All Building System.
2. In addition to the requirements of Article 2.3.1.1. of the OBC, the structural design shall be carried out by a Professional Engineer as defined in the *Professional Engineers Act*, (Ontario).
3. The Cover-All Membranes installed in conjunction with the building system, shall be constructed as per the requirements of Subsection 3.2.2. of the OBC.
4. Except as permitted in Article 3.2.2.17. of the OBC, the Cover-All Membranes shall not be used where the assembly is required to have a fire-resistance rating.
5. The Cover-All Membranes are authorized for use in combustible construction only.
6. The Cover-All Membranes shall not be used in a building more than 1 storey in building height.
7. The Cover-All Membranes shall not be used in the construction of Cover-All buildings where the major occupancy is Group B, C, or F Division 1, as defined by the OBC.
8. The Cover-All Membranes shall meet the following standards:
  - a. CAN/ULC-S109-M87 "Standard for Flame Test of Flame-Resistant Fabrics and Films",
  - b. NFPA 701-1997 "Methods of Fire Test for Flame Resistant Textiles and Films", and
  - c. CAN/ULC-S102.2-M88 "Standard Test Method for Surface Burning Characteristics of Building Materials."

9. The Cover-All Membrane shall be installed by Cover-All Building Systems' approved installers.
10. The Cover-All Membranes shall be installed as per the Cover-All Building Systems Installation Manuals.
11. The Cover-All Membranes shall be identified by a permanent mark that indicates the manufacturer's name and registered trademark.
12. The Cover-All Membranes shall not have a flame spread rating more than 25.
13. The Cover-All Membranes, used in the construction of Cover-All buildings, shall have the spatial separation determined in accordance with Subsection 3.2.3. or Subsection 9.10.14. of the OBC, where the roof membrane becomes a part of the exposing building face.

**B. General Conditions**

1. The use of the Cover-All Membranes as described in A. Specific Terms and Conditions 1. must comply with the *Building Code Act, 1992 (BCA)* as amended or re-enacted from time to time and except as specifically authorized herein, with the OBC.
2. A copy of this Authorization shall accompany each application for a building permit and shall be maintained on the site of the construction with the building permit.
3. The Applicant named in Part 1 hereof shall promptly notify the BMEC of:
  - (a) the failure of the Applicant, or of the material, system or building design that is the subject matter of this Authorization, to comply with any of the terms and conditions set out in A. above; or
  - (b) the occurrence of any of the events described in Conditions 4. (a) and (b) (ii) below.
4. The BMEC may amend or revoke this Authorization where it determines that:
  - (a) any change has been made to:
    - i. the material, system or building design that is the subject matter of this Authorization;
    - ii. the address of the applicant specified in Part 1 of this Authorization; or,

- iii. the ownership of the applicant specified in Part 1 of this Authorization.
  - (b) the use of the material, system or building design authorized herein;
    - i. does not comply with the *BCA* or any relevant legislation as they may be amended or re-enacted from time to time; or
    - ii. provides an unsatisfactory level of performance, in situ.
  - (c) the Applicant, or the material, system or building design that is the subject matter of this Authorization, has failed to comply with any of the terms and conditions set out in this Authorization; or
  - (d) any OBC provision relevant to this Authorization has been amended or remade.
5. Where the BMEC receives additional information concerning the material, system or building design authorized herein, the BMEC may review this Authorization and the BMEC may after the review amend or revoke this Authorization as in the opinion of the BMEC may be necessary.

Dated at Toronto this 25th day of March 2004.

## **BUILDING MATERIALS EVALUATION COMMISSION**

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Rashmi Nathwani, Chair