



**Agnico-Eagle Mines Ltd.  
Welding Control Procedure**

**PRO Number : AEM-WE-PRO-001  
Contract no. : C22466T**



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## **Appendix A**

**ALL APPLICABLE ITRs & LOGs**



**Agnico-Eagle Mines Ltd.  
Welding Control Procedure**

**PRO Number : AEM-WE-PRO-001  
Contract no. : C22466T**



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## **Appendix A**

**ALL APPLICABLE ITRs & LOGs**

Date de qualification	Qualification
2017-05-06	Soudage sur appareils sous pression Classe A Tuyaux 50 mm, catégorie 160-P1-6G, F3-F4

Emploi

Québec



Certificat de qualification

Nom de famille <b>MASSICOTTE-ROY</b>	Numéro de dossier <b>0000000176159</b>
Prénom <b>ALEXANDRE</b>	

Déllvré en vertu de la Loi sur la formation et la qualification professionnelles de la main-d'oeuvre (L.R.Q., chapitre F-5).

Déllvré le

**2017-05-06**

Expire le

**2019-05-06**

X

Signature

Ministère du Travail, de l'Emploi et de la Solidarité sociale

**001386104**

Date de qualification	Qualification
2015-11-18	Soudage sur appareils sous pression Classe A Tuyaux 50 mm, catégorie 160-P1-6G, F3-F4

334 (07-2009)

Plier

Détacher sur le pointillé

Plier

Emploi

Québec

Certificat de qualification

Nom de famille	FAUBERT
Prénom	STEVEN
Numéro de dossier	0000000125746

Délivré en vertu de la Loi sur la formation et la qualification professionnelles de la main-d'oeuvre (L.R.Q., chapitre F-5).

Délivré le	2015-11-18
Expire le	2017-11-18

x *Steven Faubert*  
Signature

Ministère du Travail, de l'Emploi et de la Solidarité sociale 001139657

Objet : Délivrance de votre certificat de qualification

Date de qualification	Qualification
2015-05-28	Soudage sur appareils sous pression Classe A Tuyaux 50 mm, catégorie 160-P1-6G, F3-F4

Emploi

Québec  Certificat de qualification

Nom de famille <b>MARTEL</b>	
Prénom <b>SYLVAIN</b>	Numéro de dossier <b>0000000046942</b>

Délivré en vertu de la Loi sur la formation et la qualification professionnelles de la main-d'oeuvre (L.R.Q., chapitre F-5).

Délivré le <b>2015-05-28</b>
Expire le <b>2017-05-28</b>

X *Sylvain Martel*  
Signature

Ministère de l'Emploi et de la Solidarité sociale

**001055843**

Date de qualification

2017-05-06

Qualification

Soudage sur appareils sous pression Classe A

Tuyaux 50 mm, catégorie 160-P1-6G, F3-F4

Emploi

Québec



Certificat de qualification

Nom de famille

LEROUX

Prénom

STEPHANE

Numéro de dossier

0000000102229

Délivré en vertu de la Loi sur la formation et la qualification professionnelles de la main-d'œuvre (L.R.Q., chapitre F-5).

Délivré le

2017-05-06

Expire le

2019-05-06

X

*Stephane Leroux*  
Signature

Ministère du Travail, de l'Emploi et de la Solidarité sociale

001386103

**Alberta**

Municipal Affairs  
and Housing

21396

**ABSA**

the pressure equipment safety authority

**Grade "B" Pressure Welder's**

**Certificate of Competency**

This is to certify that **Marylene Paul**  
having complied with provisions of the Safety Codes Act, is authorized to engage  
in pressure welding in accordance with the prescribed Regulations.

Dated at Edmonton  
October 04, 2007

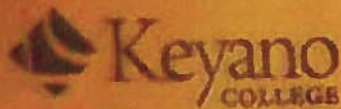


**W-26448**

File no.

A handwritten signature in black ink, appearing to read "S. L. Laha".

Chief Inspector and Administrator



# Welder Performance Qualification Card

AOQP No.  
7121

MARYLENE PAUL  
Name

W-26448  
File No.

This card is issued pursuant to the Safety Codes Act and the Pressure Welders Regulation. The performance qualification is in accordance with Section IX of the ASME Code and subject to the limitations on the reverse side.

MARCH 17-2016  
Date of Test

Marylene Paul  
Welder's Signature

Louis Boutin  
Welding Examiner (Print/type)

CARD No. **8816**

# Performance Qualification

CARD No. **8816**

Processes SMAW SMAW

Materials (P. No.) 1.15.34/4

Filler Metal (F. No.) F3 F4

Min. Diameter 25mm

Max. Deposited Weld Metal 6mm MAX

Position(s) Qualified ALL

Backing OPTIONAL

Backing Gas N/A

Progression UPHILL

28 March 12 [Signature] 15000

PQ Expiry Date Welding Examiner Signature File No.



6515-C-270-007

Fuel Tanks Piping Supply and Installation

## Inspection Deficiency Log

Document Number : AEM-GE-LOG-004  
Contract Number : C22466T / C22498E



**AGNICO EAGLE**

Number	Description	Initiator	Dept.	Date	Contract No.	Progress Status
Deficiency-001	Broken Handle on man door operator room - Pumping Station Rankin	Promec	Piping	5-Sep-17	C22466T/C22498E	
Deficiency-002	Ripped door hinges - Damage Reported by Andrew Martin AEM - Becancour	AEM/Promec	Piping	5-Sep-17	C22466T/C22498E	
Deficiency-003						N/A
Deficiency-004						N/A
Deficiency-005						N/A
Deficiency-006						N/A
Deficiency-007						N/A
Deficiency-008						N/A
Deficiency-009						N/A
Deficiency-010						N/A
Deficiency-011						N/A
Deficiency-012						N/A
Deficiency-013						N/A
Deficiency-014						N/A
Deficiency-015						N/A
Deficiency-016						N/A
Deficiency-017						N/A
Deficiency-018						N/A
Deficiency-019						N/A
Deficiency-020						N/A
Deficiency-021						N/A
Deficiency-022						N/A
Deficiency-023						N/A
Deficiency-024						N/A
Deficiency-025						N/A
Deficiency-026						N/A
Deficiency-027						N/A
Deficiency-028						N/A
Deficiency-029						N/A
Deficiency-030						N/A
Deficiency-031						N/A
Deficiency-032						N/A
Deficiency-033						N/A
Deficiency-034						N/A
Deficiency-035						N/A
Deficiency-036						N/A
Deficiency-037						N/A
Deficiency-038						N/A
Deficiency-039						N/A
Deficiency-040						N/A



**Agnico-Eagle Mines Ltd.**  
**Inspection Deficiency Report**

ITR Number : AEM-GE-ITR-005  
Contract no. : C22466T / C22498E



**AGNICO EAGLE**

Area: Rankin Inlet	CWP No: C-270-001
Equipment Tag No: Pumping Station Rankin	Inspection Deficiency Report No: 001
Date: 2017-09-05	Page 1 of 4
Reference Drawings: Not applicable	
Reference Photos: IMG-0835, IMG-0836, Crushed Gutter Container Rankin	
<b>Description of Deficiency:</b> Broken Door Handle of man door operator room side, as-found on Rankin Pumping Station Container. Bump on container top back side wall, as-found on Rankin Container. Crushed gutter above door on Pumping Station Container, as-found.	
<b>Suggested Solution:</b> Purchase and replacement of the handle. Repair the gutter, if possible, if not, purchase a new one and replacement. Repair the bump (small puncture) on the wall, if possible.	
Engineering Contact Made: Yes <input type="checkbox"/> No <input type="checkbox"/> Name:	
Course of Action:	
Engineering Follow-up Required: Yes <input type="checkbox"/> No <input type="checkbox"/> Date Required:	

Robbie Lunelle

Promec's Representative  
Print Name

Stephane Gionet

Client's Representative  
Print Name

[Signature]

Promec's Representative  
Signature

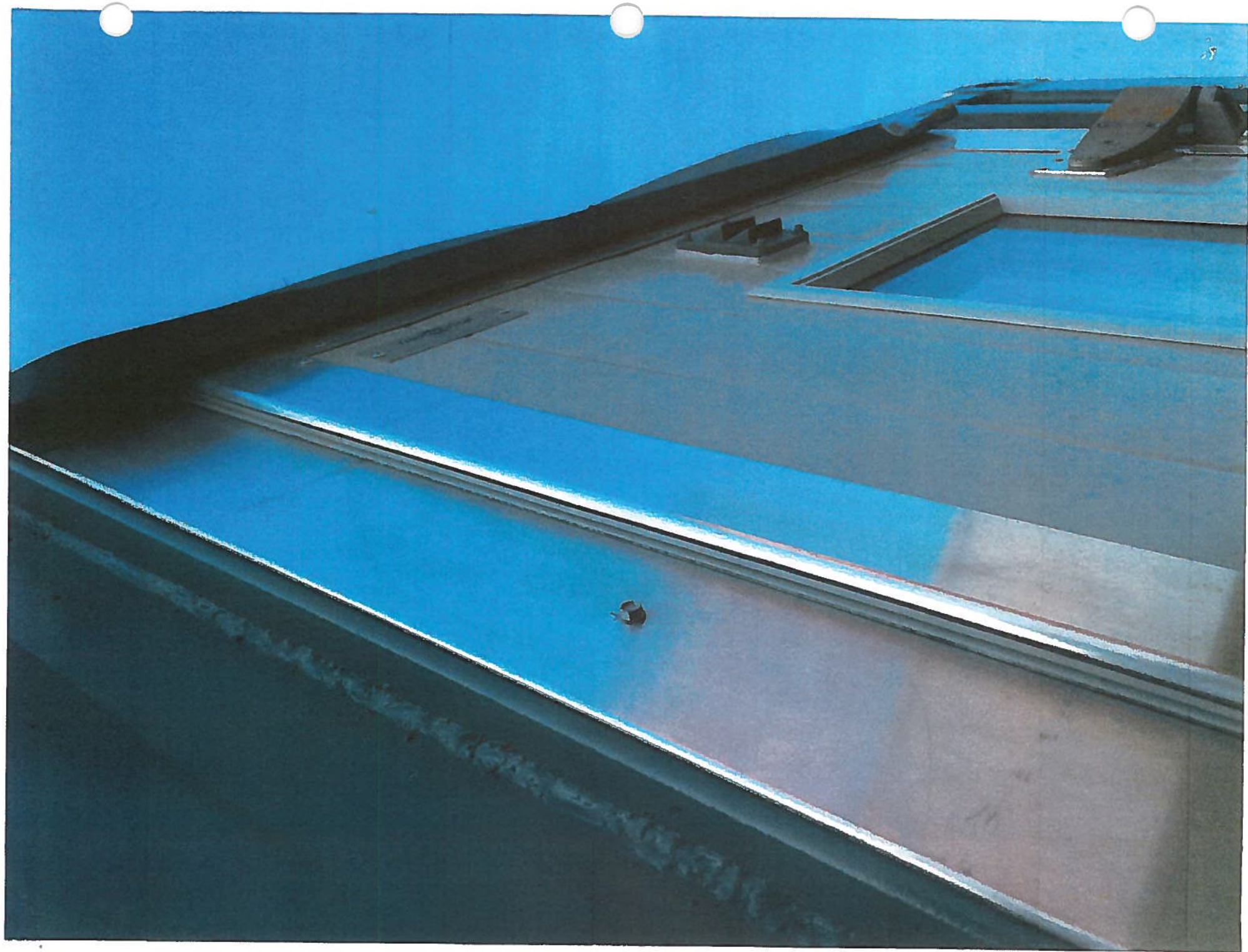
07/09/17  
Date

[Signature]

Client's Representative  
Signature

07 Sept. 2017  
Date







**Agnico-Eagle Mines Ltd.**  
**Inspection Deficiency Report**

ITR Number : AEM-GE-ITR-005  
Contract no. : C22466T / C22498E



**AGNICO EAGLE**

Area: Rankin Inlet - Port of Becancour	CWP No: C-270-007
Equipment Tag No: Filtration Container	Inspection Deficiency Report No: 002
Date: 2017-09-05	Page <u>1</u> of <u>5</u>
Reference Drawings: Not applicable	
Reference Photos: IMG_1352, IMG_1351, IMG_1350, IMG_1349	
<b>Description of Deficiency:</b> Damage reported by Andrew Martin, handling in port of Becancour. Ripped door hinges. See pictures.	
<b>Suggested Solution:</b> Purchase and replacement of ripped hinges.	
Engineering Contact Made: Yes <input type="checkbox"/> No <input type="checkbox"/> Name:	
Course of Action:	
Engineering Follow-up Required: Yes <input type="checkbox"/> No <input type="checkbox"/> Date Required:	

Robbie Lamothe

Promec's Representative  
Print Name

Promec's Representative  
Signature

Date

\_\_\_\_\_  
Client's Representative  
Print Name

\_\_\_\_\_  
Client's Representative  
Signature

Date



**APPROVED FOR TRANSPORT  
UNDER CUSTOMS SEAL**  
USA/285-68/16

TYPE (MODEL NO.) OF THE CONTAINER:

MANUFACTURER'S NO.:

DATE OF MANUFACTURE:

DATE OF INSPECTION:

INSPECTOR'S NAME:

INSPECTOR'S SIGNATURE:

INSPECTOR'S TITLE:

INSPECTOR'S ORGANIZATION:

INSPECTOR'S ADDRESS:

INSPECTOR'S PHONE:

INSPECTOR'S FAX:

INSPECTOR'S E-MAIL:

INSPECTOR'S WEBSITE:

INSPECTOR'S SIGNATURE:

INSPECTOR'S TITLE:

INSPECTOR'S ORGANIZATION:

INSPECTOR'S ADDRESS:

INSPECTOR'S PHONE:

INSPECTOR'S FAX:

INSPECTOR'S E-MAIL:

INSPECTOR'S WEBSITE:

**CSC SAFETY APPROVAL**  
USA/285-68/16

DATE OF MANUFACTURE:

DATE OF INSPECTION:

INSPECTOR'S NAME:

INSPECTOR'S SIGNATURE:

INSPECTOR'S TITLE:

INSPECTOR'S ORGANIZATION:

INSPECTOR'S ADDRESS:

INSPECTOR'S PHONE:

INSPECTOR'S FAX:

INSPECTOR'S E-MAIL:

INSPECTOR'S WEBSITE:

INSPECTOR'S SIGNATURE:

INSPECTOR'S TITLE:

INSPECTOR'S ORGANIZATION:

INSPECTOR'S ADDRESS:

INSPECTOR'S PHONE:

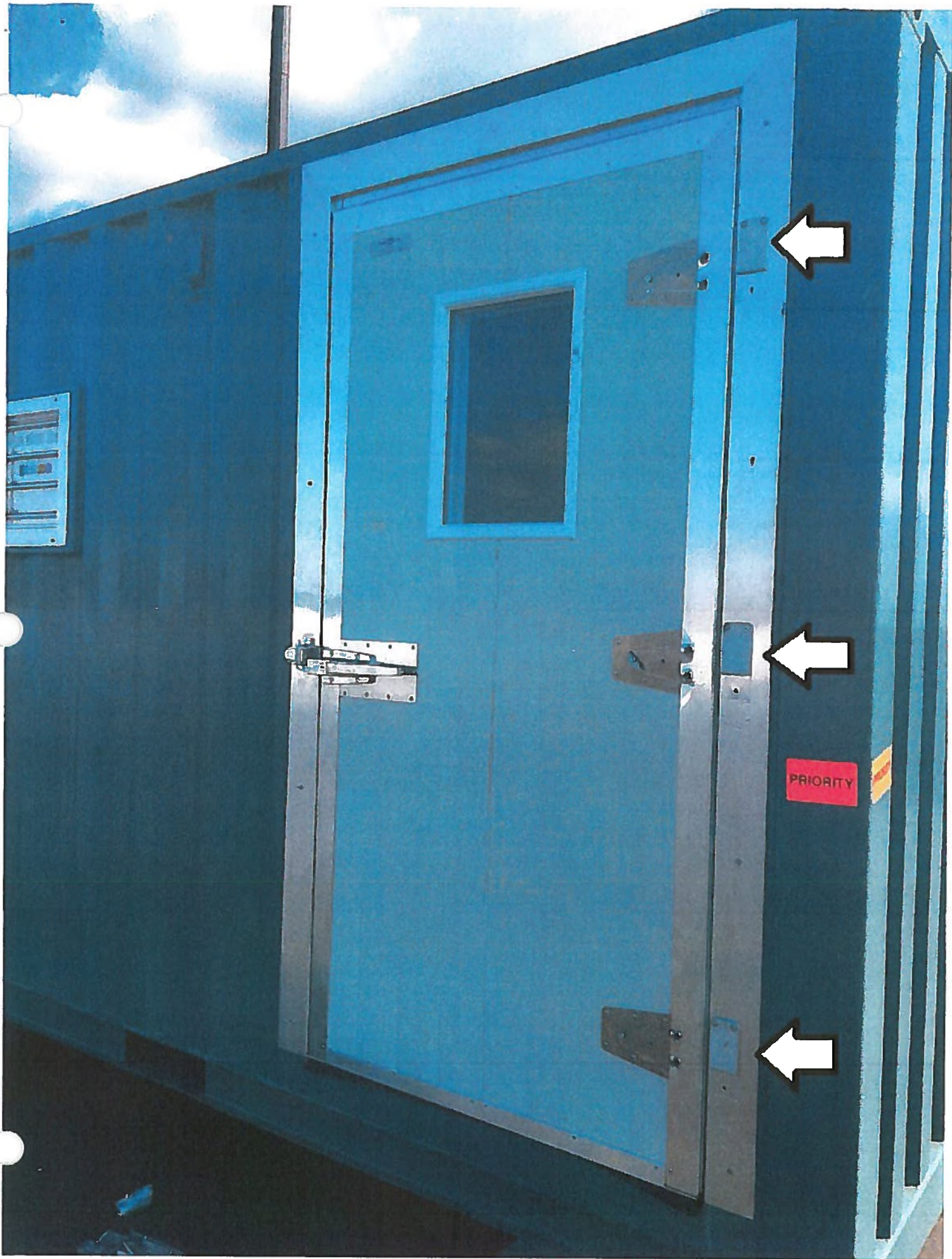
INSPECTOR'S FAX:

INSPECTOR'S E-MAIL:

INSPECTOR'S WEBSITE:

**PROMEC**  
**Filtration Container for Rankin Inlet**

No. Contrat	OC-682373
Control Number	224531
Destination	Rankin Inlet
Poids	6000 kg
Dimensions	6,05 x 3,10 x 3,36 m









## Vendor Document Status

### AGNICO EAGLE

- 1 ☐ Proceed to next submission and status.
- 2 ☐ Proceed with exceptions as noted to next submission and status.
- 3 ☐ Do not proceed.  
Revise as noted and resubmit next submission and status.
- 4 ☒ Complete, no further submission required.

By:

Jean-Francois Tremblay

Date:

2017-05-02

Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.

Agnico Eagle  
No.

6515-C-270-007-141-TES-0017 R: Sub001

**DOCUMENT FOR INFORMATION**



**Agnico-Eagle Mines Ltd.**  
**Inspection Deficiency Report**

ITR Number : AEM-GE-ITR-005  
Contract no. : C22466T / C22498E



**AGNICO EAGLE**

Area:	CWP No:
Equipment Tag No:	Inspection Deficiency Report No:
Date:	Page _____ of _____
Reference Drawings:	
Reference Photos:	
Description of Deficiency:	
Suggested Solution:	
Engineering Contact Made: Yes <input type="checkbox"/> No <input type="checkbox"/> Name:	
Course of Action:	
Engineering Follow-up Required: Yes <input type="checkbox"/> No <input type="checkbox"/> Date Required:	

\_\_\_\_\_  
Promec's Representative  
Print Name

\_\_\_\_\_  
Client's Representative  
Print Name

\_\_\_\_\_  
Promec's Representative  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Client's Representative  
Signature

\_\_\_\_\_  
Date



6515-C-270-007

Fuel Tanks Piping Supply and Installation

# Inspection Deficiency Log

Document Number : AEM-GE-LOG-004

Contract Number : C22466T / C22984E



AGNICO EAGLE

Number	Description	Initiator	Dept.	Date	Contract No.	Progress Status
Deficiency-001	<div> <p><b>Vendor Document Status</b></p> <p><b>AGNICO EAGLE</b></p> <p>1 <input type="checkbox"/> Proceed to next submission and status.</p> <p>2 <input type="checkbox"/> Proceed with exceptions as noted to next submission and status.</p> <p>3 <input type="checkbox"/> Do not proceed. Revise as noted and resubmit next submission and status.</p> <p>4 <input checked="" type="checkbox"/> Complete, no further submission required.</p> <p>By: <b>JEAN-FRANCOIS TREMBLAY</b> Date: <b>2017-05-16</b></p> <p>Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.</p> <p>Agnico Eagle No. 6515-C-270-007-141-TES-0020 R: Sub001</p> <p><b>DOCUMENT FOR INFORMATION</b></p> </div>					N/A
Deficiency-002						N/A
Deficiency-003						N/A
Deficiency-004						N/A
Deficiency-005						N/A
Deficiency-006						N/A
Deficiency-007						N/A
Deficiency-008						N/A
Deficiency-009						N/A
Deficiency-010						N/A
Deficiency-011						N/A
Deficiency-012						N/A
Deficiency-013						N/A
Deficiency-014						N/A
Deficiency-015						N/A
Deficiency-016						N/A
Deficiency-017						N/A
Deficiency-018						N/A
Deficiency-019						N/A
Deficiency-020						N/A
Deficiency-021						N/A
Deficiency-022						N/A
Deficiency-023						N/A
Deficiency-024						N/A
Deficiency-025						N/A
Deficiency-026						N/A
Deficiency-027						N/A
Deficiency-028						N/A
Deficiency-029						N/A
Deficiency-030						N/A
Deficiency-031						N/A
Deficiency-032						N/A
Deficiency-033						N/A
Deficiency-034						N/A
Deficiency-035						N/A
Deficiency-036						N/A
Deficiency-037						N/A
Deficiency-038						N/A
Deficiency-039						N/A
Deficiency-040						N/A



Custom HVAC manufactured products

## Inspection report – As built unit dimensions

Contract number : Amp17-17 (PS1-103)

Client : Groupe promec inc.

CLIENT IDENTIFICATION:					
Monitored points	C	NC	NN	Comments	Reference documents
Validation of dimensions according to plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C : complying NC : non-complying NN : not-needed					

Verified by : Karen Gendreau-Lacoste

Signature : Karen G. lacoste

Date : 26 mai 2017

Reviewd by : Richard Piquette, Operations director

Signature : \_\_\_\_\_

Date : \_\_\_\_\_



Custom HVAC manufactured products

## Inspection report - General

Contract number : Amp17-17 (PSI-103)

Client : Groupe promec inc.

### CLIENT IDENTIFICATION:

#### 1. General look of the container

Points subject to monitoring	C	NC	NN	Comments	Reference documentation
1,1 State of the doores (joints, windows, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1,2 General structure state	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1,3 Inside finnish	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1,4 Sticker installation (Coils, units, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
1,5 Cleanliness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1,6 Sealant joints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

C : complying NC : non-complying NN : not-needed

**2. OTHER INTEGRATED EQUIPMENTS & TESTS**

Points subject to monitoring	C	NC	NN	Comments	Reference documentation
2,1 Insulation (Installation as per specification)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2,2 Vents and piping	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2,3 Watertight containment and drains	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2,4 Filters and framing (state, type, number, arrangements, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2,5 Lights, sockets, switches (type, number, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2,6 Instrumentation (pressure, flow, temperature, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2,7 The state and disposition of other components (burner, water separator, special filters, humidifier, electrical coils, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2,8 Silencers, valves, air scrubbers, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2,9 Detailed pictures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2,10 Nameplates	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

C : complying NC : non-complying NN : not-needed

Verified by :

Karen Gendreau-Lacoste

Signature :

Karen G. lacoste

Date :


26 mai 2017


Reviewed by :

Richard Piquette, Operations director

Signature :

Date :

 <b>AGNICO EAGLE</b>	<b>Vendor Document Status</b>
<b>1</b> <input type="checkbox"/> Proceed to next submission and status.	
<b>2</b> <input type="checkbox"/> Proceed with exceptions as noted to next submission and status.	
<b>3</b> <input type="checkbox"/> Do not proceed. Revise as noted and resubmit next submission and status.	
<b>4</b> <input checked="" type="checkbox"/> Complete, no further submission required.	
By: <b>Joël Morliere</b>	Date: <b>2017-06-05</b>
Review and authorization to fabricate are only for general conformance with the design concept of the Project as expressed in the Contract Documents. Sole responsibility for the accuracy and completeness of this document, including but not limited to dimensions and quantities, remains with the Supplier/Contractor. Agnico Eagle does not warrant the accuracy or completeness of any of the information contained herein, nor does Agnico Eagle authorize or approve any construction means, methods, techniques, sequences or any safety precautions or procedures.	
Agnico Eagle No. <b>6515-C-270-007-265-EDS-0034 R: Sub002</b>	
<b>DOCUMENT FOR INFORMATION</b>	

 <b>WSP</b>	<b>SHOP DRAWING DATA SHEET</b>
<i>Affixing this stamp confirms that an administrative approval and/or a verification of compliance with shop drawings or specifications was made, but does not entail the liability of the author of the work or its owner with regards to this shop drawing or data sheet, for which the contractor is the sole responsible.</i>	
<input checked="" type="checkbox"/> Reviewed <input type="checkbox"/> Reviewed as noted <input type="checkbox"/> Rejected <input type="checkbox"/> Filed for records	
<i>The contractor, supplier and/or sub-contractor is responsible for: confirming and coordinating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his or her work with that of all other trades and performing all work in a safe and satisfactory manner.</i>	
By: <b>J. Morliere</b>	Date: <b>2017/06/05</b>
G-ADM-ZZZ-82-11E-2	Project #: <b>151-06440-40</b>

## PRE FABRICATED BUILDING

## TECHNICAL SPECIFICATION



**Equipment:** 6515-103, Pumping station

**Date:** May 23 2017

**Client :** PROMEC

**Responsable:** Eric Poulin, piping Director

**Contract:** AMP17-17

**Revision :** For fabrication

**Submitted by :** Francis St-Pierre, Ing.

**Serial number :** AMP00378

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Manufacturier de produits CVAC sur mesure

Project : 6515-103, Pumping station  
Client : Promec

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## Table of Contents

1. General characteristics
2. Fabrication characteristics
3. Fabrication characteristics (continued)
4. General arrangement drawings



Manufacturier de produits CVAC sur mesure

Project : 6515-103, Pumping station  
Client : Promec

## Nomenclature

	AMP -	PFB	2	160	E
<b>BRAND</b>					
AMP- AIR MP					
<b>MODEL</b>					
PFB-	PRE FABRICATED BUILDING				
AHU-	AIR HANDLING UNIT				
<b>INSTALLATION</b>					
1- INTERIOR					
2- EXTERIOR					
<b>FT<sup>2</sup></b>					
<b>TYPE OF BUILDING</b>					
E- E-HOUSE					
M- MECHANICAL ROOM					



Manufacturier de produits CVAC sur mesure

Project : 6515-103, Pumping station

Client : Promec

---

## 1. General characteristics



Manufacturier de produits CVAC sur mesure

Project : 6515-103, Pumping station  
Client : Promec

## General characteristics

### Type of unit

- ☐ Recirculation
- ☐ Cooling
- ☐ Filtration
- ☐ Heating
- ☒ Shelter
- ☐ Evacuation
- ☐ Air compensation

### Emplacement

- ☐ Interior
- ☒ Exterior

### Dimensions

	Length	Width	Height
Building (mm)	6058	2438	2591
Estimated weight	5 500 kg		

### By others

- ☒ Support pilars
- ☒ On site assembly
- ☒ Electrical integration
- ☒ HVAC
- ☒ Lighting services

### Notes :

Standard 20' container

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Manufacturier de produits CVAC sur mesure

Project : 6515-103, Pumping station

Client : Promec

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## 2. Fabrication characteristics



Manufacturier de produits CVAC sur mesure

Project : 6515-103, Pumping station  
Client : Promec

## Fabrication characteristics

Structure : 20 foot standard container

	Tôle				Gauge				Insulation		Thickness			R value
	AL	CP	GA	P	1/8	1			AI	TI	2"	4"	10"	
						1	20	26						
Interior finish	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26
Exterior finish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--
Ceiling	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26
Roof	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	--
Floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	26

## Finish

Structural steel

Exterior finish

Inside finish

### Specification

Prep: Sandblast SSPC6 / Paint: Epoxy Barust 235, 8 to 12 mils dry

Paint: Solvent clean SSPC1 / Polyurethane "Decthane 359" 2 to 3mils dry,  
Color: Slate Blue (QC 8260)

Galvanized grating on floor. Cement panels on walls.

AL: Aluminum checker plate  
AI: Acoustic insulation

CP: Cement panel ½"  
TI: Thermal insulation

GA: Galv. sheet metal

P: Plywood ¾"

5/10/17 16:31:26

EMAIL PAGE COUVERTURE

=====

Société: Acier Leroux - Amos

5/10/17 16:31:26

Document Sommaire

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Objet: MILL TEST CERTIFICATE

NO.COMMANDE :89337400

No.Bc Du Client :AIR-1822

City : ROUYN-NORANDA State/Province . QC

Séquence correspondant au(x) MTR imprimé(s):

Description item:

Coulée

MTR

1/8 X 1 19-4 CAILLEBOTIS GALV

LETTRE CONFORME 089026959



**FISHER & LUDLOW**  
A NUCOR Company

**CERTIFICAT DE CONFORMITÉ 2017**

ACIER LEROUX  
1331 Graham Bell  
Boucherville, Qc  
J4B 6A1

ATTN: Chantal Boisvert

A qui de droit,

Fisher & Ludlow certifie que le matériel utilisé pour la fourniture et/ou la fabrication du caillebotis soudé en acier, décrit ci-dessous, selon votre commande, est conforme à la norme de NAAMM MBG 531-00, NAAMM MBG 532-00.

**DESCRIPTION**

**SPECIFICATION**

-----  
Caillebotis et attaches

Non peint, peint noir et galvanisé  
Aluminium  
Acier inoxydable

-----  
ASTM -A1011/A1011M  
ASTM -B221/B221M  
ASTM - A666

Planches de sécurité Grip Span & Shur Grip

Pre-galvanisé  
Aluminium  
Acier inoxydable

(G90) - (ASTM - A653)  
5052-H32 (ASTM-B209)  
(ASTM - A666)

Barreaux d'échelles et feuilles "Shur Step"

H.R.P.O.  
Aluminium  
Acier inoxydable

(ASTM - A569/A569M)  
5052-H32 (ASTM-B209)  
(ASTM - A666)

**Fisher & Ludlow Division Nucor**

12450, Boul. Industriel Montreal, Pointe-aux-Trembles, Qc H1B 5M5  
Tel: 514.640.5085 1.800.268.6277 Télécopieur/Fax: 514.640.1115

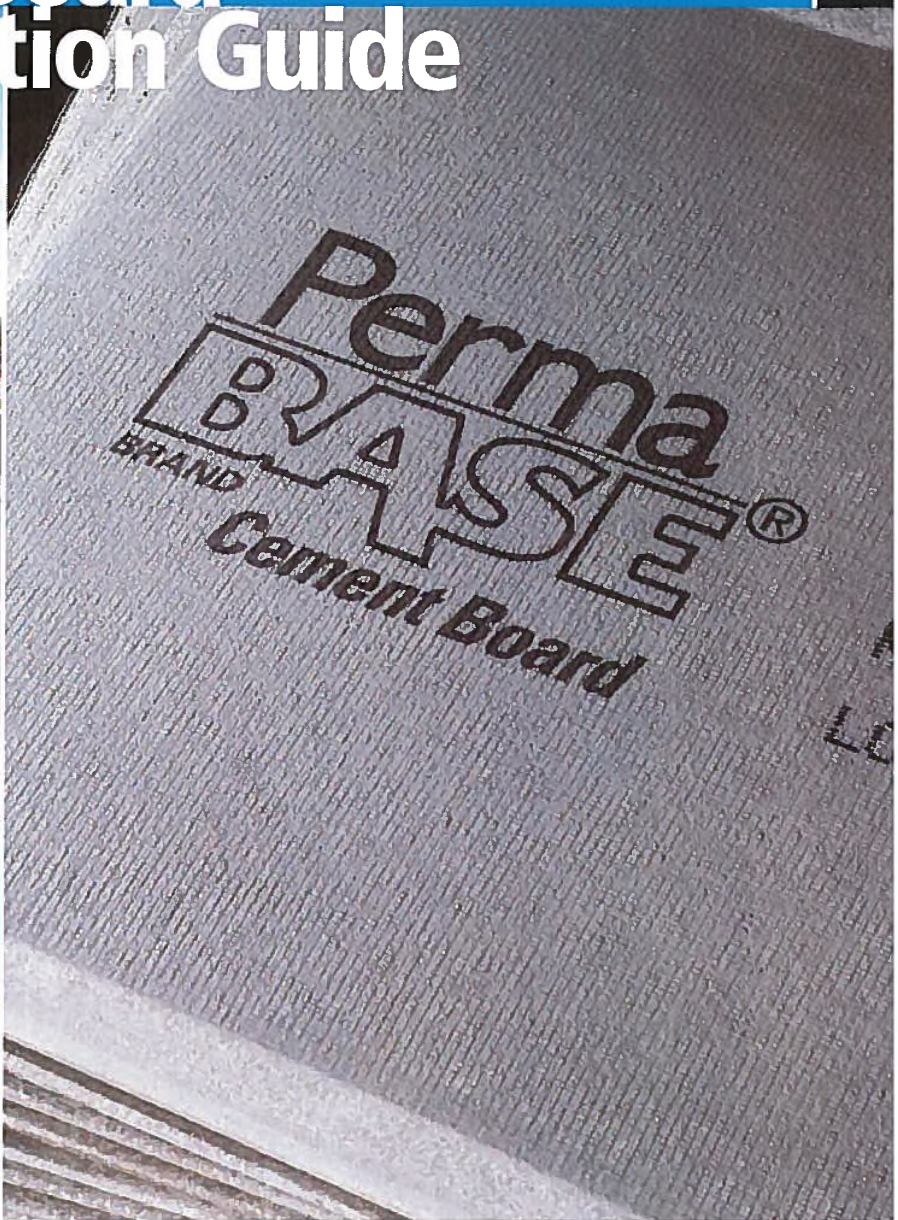


089026959

PermaBase<sup>MD</sup> BRAND

09 28 00/NGC

# Cement Board Construction Guide



**UNIFIX INC.** <sup>®</sup>  
A SUBSIDIARY OF NATIONAL GYPSUM COMPANY

# Helping You Build Better

## Look Closer At The Best Cement Board Substrate

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## With Design That Considers The Environment

Together, we can attain the highest level of ecological responsibility and resource-efficient technology. National Gypsum is committed to developing and implementing sustainable green building policies, standards and practices. Beyond offering products that can help contribute to healthier environments and have achieved GREENGUARD Certification for indoor air quality, we can help you meet the criteria for green programs and LEED credits.



PRODUCT  
CERTIFIED FOR  
LOW CHEMICAL  
EMISSIONS:  
UL.COM/GG  
UL 2818

## With High-Quality Products And Resources

Founded in 1925, National Gypsum is one of the world's largest producers of quality building products. For nearly a century, customers like you have looked to us for the best products, service and technical support. With a focus on sustainability, we strive to bring you the finest in construction products, education and resources to meet and exceed your expectations.



## With Technical Support You Can Count On

Great products are nothing without great customer service. For detailed technical information about product applications, installation requirements, code requirements or roof and wall assemblies, call 1-800-NATIONAL<sup>MD</sup>. Talk directly to a technical expert with up-to-date knowledge of products, specifications, building codes and more. Our technical experts can even review your plans and drawings and get back to you with answers to your questions within 48 hours.



# Working Wherever Your Project Takes You



## Choose From Four Types Of PermaBase<sup>MD</sup> BRAND Cement Board:

### More Hard-Working Varieties With Qualities You Can Depend On

With four types of PermaBase<sup>MD</sup> BRAND Cement Board to choose from, you'll find a match for most any project. This durable substrate withstands prolonged exposure to moisture in both interior and exterior applications. Lightweight and easy to install, PermaBase promises to deliver for the long run – with the industry's best warranties. It is also GREENGUARD Certified for low-chemical emissions, which can contribute to healthier indoor environments.

### Saving You Time And Money

These exclusive PermaBase features translate to cost savings for you:

**EdgeTech<sup>MD</sup> Technology** – This patented, reinforced edge allows fasteners to be installed closer to the board's edge and reduces damage from handling.

**Polystyrene Beads** – Embedded in the PermaBase core, these beads help to lighten the board's weight, improve the ease of cutting, and create lower water absorption, preventing the mortar/finish adhesive from drying prematurely.

## Our PermaBase<sup>MD</sup> Product Family

### 1 PermaBase<sup>MD</sup> Cement Board

The original that set the industry standard.

### 2 PermaBase PLUS<sup>MD</sup> Cement Board

Weighs 25% less than other cement boards on the market.

### 3 PermaBase UltraBacker<sup>MD</sup> Cement Board

Provides excellent rigidity for special applications with the lowest water-absorption rate.

### 4 PermaBase Flex<sup>MD</sup> Cement Board

Very flexible yet strong, and ideal for use around archways, columns, stairwells – wherever an evenly curved surface is required.

#### APPLICATIONS

Product	Floors	Countertops	Walls	Ceilings	Exteriors
1/4" PermaBase	●	●	○	○	○
1/4" UltraBacker	●	●	○	○	○
7/16" PermaBase PLUS	●	●	●	●	●
1/2" PermaBase	●	●	●	●	●
1/2" PermaBase PLUS	●	●	●	●	●
5/8" PermaBase	●	●	●	●	●
5/8" PermaBase PLUS	●	●	●	●	●
1/2" PermaBase FLEX	○	○	●	●	●

Recommended: ● Yes ○ No

# Building In Strength And Quality

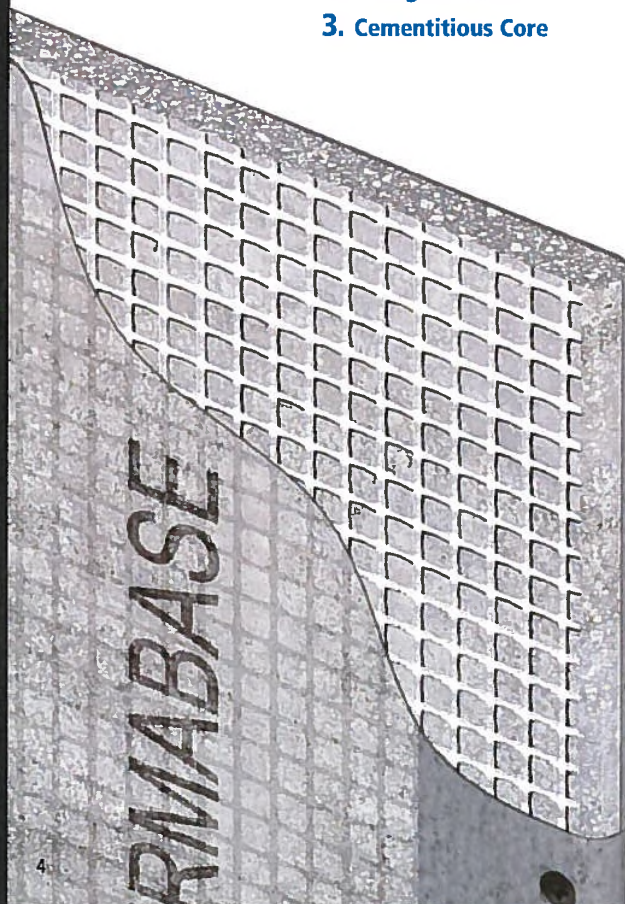
## Reinforce With The Best Rigid Substrate: PermaBase<sup>MD</sup> BRAND Cement Board

PermaBase<sup>MD</sup> provides a durable surface designed to withstand prolonged exposure to moisture. Made with Portland cement, aggregate and fiberglass mesh, it works well as an underlayment for tub and shower surrounds, countertops, flooring and a variety of other interior and exterior applications. Lightweight and easy to install, our patented EdgeTech<sup>MD</sup> Technology allows a closer nail or screw application.

### Quality To The Core



1. Patented Reinforced Edge
2. Fiberglass Mesh
3. Cementitious Core



### Resists Moisture Better

- Stays intact when exposed to water: will not rot, disintegrate or swell – built for the long run.
- Achieves the industry's lowest water-absorption rating (ASTM C473) – offering better installation.
- Helps inhibit mold growth with the highest possible score on mold tests (ASTM D3273 and ASTM G21).



### Stays Strong And Lasts Long

- Resists impact and remains dimensionally stable – extending the life of your project.
- Holds up to the toughest conditions.



### Installs Quickly

- Lightweight and easy to cut – speeding up installation.
- Reduces jobsite waste – easier, cleaner cut.
- Patented EdgeTech<sup>MD</sup> Technology allows for a closer edge fastening and reduces damage from handling.



### Works For Interior And Exterior Projects

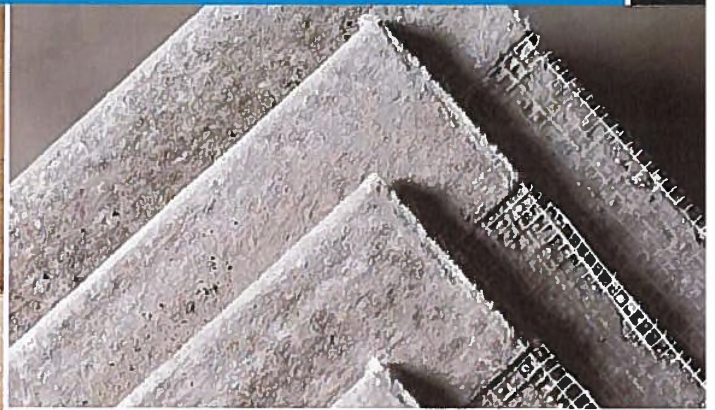
#### – One Panel, Many Applications

- Adhere tile, stone or thin brick directly to PermaBase in exterior applications – saving time and money.
- Durable substrate for direct-applied coating systems.
- Meets UL & ULC classifications for one- and two-hour fire-rated assemblies.
- Building code approved – one substrate that does the job of many.



### Offers Best In Class Warranty

- Lifetime Limited Warranty: Interior applications.
- 15-Year Limited Warranty: Exterior applications.



## What Sets PermaBase<sup>MD</sup> Apart From The Rest?

Physical Feature Benefits	PermaBase Cement Board	Other Cement Boards	Fiber Cement Boards
Low Weight Glass Mesh Cement Board	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reinforced Edge	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fastens Near Edge With No Breakout	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Highest Damage Resistancy From Handling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cleanest To Score And Snap	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lowest Water Absorption	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meets 40 psf Rating Wind Load Test Results (Stud spacing 16" o.c.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cuts With Utility Knife Vs. Power Tools	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Standard Fasteners Countersink Into Board	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Can Be Used In Both Residential And Commercial Steam Rooms And Saunas	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Inorganic Vs. Organic Core	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Lifetime Limited Warranty For Interior Use	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15-Year Warranty For Exterior Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Product Feature: ☒ Yes ☐ No

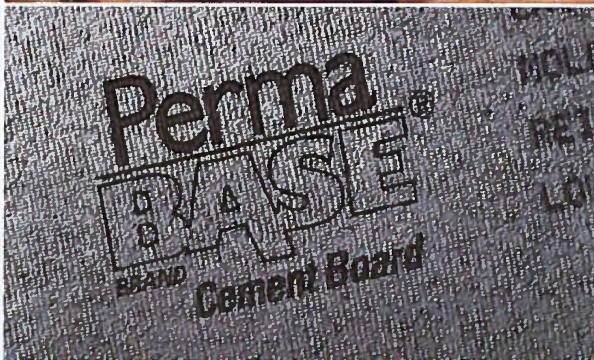
PermaBase<sup>MD</sup> BRAND Cement Board

# Expanding Your Project Horizon

## *Dream Up Your Designs – Interior And Exterior*

**Install Fast, Cut Costs And Improve Quality  
With PermaBase<sup>MD</sup> BRAND Cement Board**

- Stays strong – manufactured from cement and fiberglass reinforcement.
- Provides consistent quality – produced in a factory controlled environment and meets ASTM C1325.
- Remains dimensionally stable.
- Resists moisture and mold.
- Cuts and handles easily – patented EdgeTech<sup>MD</sup> Technology allows fasteners to be installed closer to the board's reinforced edge and reduces damage from handling.
- Absorbs less water – providing greater open time and increased workability of adhering materials.
- Offers performance enhancement options – stronger and lighter alternative to traditional methods.



### Interior Applications

PermaBase<sup>MD</sup> is a superior underlayment for many interior applications, including:

- **Kitchens**
  - Countertops
  - Backsplashes
- **Bathrooms**
  - Shower and tub enclosures
  - Garden and whirlpool tubs
  - Steamrooms and saunas
- **Special Additions**
  - Swimming pool and whirlpool decks and enclosures
- **Flooring**
  - For kitchens and bathrooms
  - For entryways and foyers
  - For laundry rooms
- **Walls**
  - For bathrooms
  - For accent walls
  - For fireplaces

### Exterior Applications

PermaBase provides an excellent substrate for many in-demand exterior applications, including Cement Board Masonry Veneer Wall System (CBMV), Cement Board Stucco System (CBSS), Continuous Insulation (CI), and Exterior Insulation and Finish System (EIFS). PermaBase allows the combination of exterior finishes on one continuous wall sheathing, providing greater design flexibility.

- Commercial exteriors
- Residential exteriors
- Outdoor kitchens
- Decks



## Cement Board Masonry Veneer Wall System (CBMV)

Combine the strength and durability of PermaBase with the popular beauty of stone and thin brick veneers. Use in residential and low-rise commercial applications.

### Cement Board Masonry Veneer Wall System is designed to:

- Offer a complete, engineered solution for installation.
- Provide increased performance by utilizing polymer modified adhesive mortars (designed for hanging materials) vs. type S and N mortars (developed for stacking materials).

- Speed up your schedule – faster, easier and cleaner than traditional metal lath/scratch coat method.
- Offer the ability to incorporate an effective water-management system (type and placement of water barrier will vary based on local codes and/or warranties).

### Designs you can achieve with this system:

- Use for a variety of building exteriors with manufactured or natural stone and thin brick veneers.

**Note:** A code-approved Water/Air Resistive Barrier (WRB) must first be installed to protect the cavity. For limitations, please see page 17 (Installation Guide).

## Cement Board Stucco Wall System (CBSS)

Combine the strength and durability of PermaBase with the performance and aesthetics of reinforced base coats and textured finishes. Use in residential and low-rise commercial applications.

### Cement Board Stucco Wall System is designed to:

- Provide increased impact and weather resistance (appropriate for all climates).
- Resist dirt, fading, cracking and peeling.
- Speed up your schedule – easier, cleaner installation than traditional stucco.

- Provide drainage system to help prevent water from penetrating behind cladding in frame construction.
- Comply with ASTM D226, protecting approved sheathings/ structural components and helping to evacuate incidental water.

### Designs you can achieve with this system:

- Attachment of special pre-molded shapes.
- Variety of finishes – many texture and color options.

**Note:** A code-approved Water/Air Resistive Barrier (WRB) must first be installed to protect the cavity. See page 17 (Installation Guide).



# PermaBase<sup>MD</sup> BRAND Cement Board

## More Reasons PermaBase Is Excellent For Exterior Applications

- ✓ Allows multiple finishes on one substrate.
- ✓ Saves time and labor when compared with field-applied metal lath, brown and scratch coat installations.
- ✓ Works rain or shine – less affected by jobsite weather conditions.
- ✓ Scores and snaps for quick installation.
- ✓ Qualifies for multiple-year system warranties.



### PHYSICAL PROPERTIES

Property Method	Test	1/4"	7/16" PLUS	1/2"	5/8"
Water Absorption % By Weight/24 Hours	ASTM C473	<8	10	<8	<8
Flexural Strength (psi)	ASTM C47	>1750	750	750	>1000
Fastener Holding (Wet And Dry, lbs.) (0.400" head diameter)	ASTM D1037	>85	>90	>90	>90
Weight (psf)	ASTM C473	1.8	2.1	2.9	3.65
Freeze/Thaw (Cycles) Per ASTM C666 Procedure B	ASTM C666	100	100	100	100
Flame Spread/Smoke Developed	ASTM E84 CAN/ULC-S102	0/0	0/0	0/0	0/0
Compressive Strength (psi) (Indentation)	ASTM D2394	N/A	N/A	1250	1250
Wind Load (psf, Studs 16" o.c.)	ASTM E330	N/A	30	40	40
Thermal "R"/k Value	Property of Material	0.2/2.7	0.28/2.7	0.37/2.7	0.47/2.7
Bending Radius (ft.)	Property of Material	N/A	5	5	5
Falling Ball Impact (12" Drop)	ASTM D1037	Pass	Pass	Pass	Pass
Linear Variation (Due to change in moisture content)	ASTM D1037	<0.07%	0.05%	0.05%	0.05%
Fungus Resistance	ASTM G21	(No growth)	(No growth)	(No growth)	(No growth)
Mold Growth On Surface	ASTM D3273*	10	10	10	10

\* When tested by an independent laboratory per ASTM D3273 ("Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber"), PermaBase achieved a panel score of 10, the highest score possible, indicating no mold growth under the laboratory test conditions. The use of PermaBase in actual installations may not produce the same results as were achieved in controlled laboratory conditions. No material can be considered "mold proof," nor is it certain that any material will resist mold indefinitely.

### SIZES AND PACKAGING

Size: Thickness, Width And Length	# Of Pcs Per Unit
<b>PermaBase Cement Board</b>	
1/2" x 32" x 5' (12.7 mm x 813 mm x 1524 mm)	50
1/2" x 32" x 8' (12.7 mm x 813 mm x 2438 mm)	30
1/2" x 36" x 4' (12.7 mm x 914 mm x 1219 mm)	50*
1/2" x 36" x 5' (12.7 mm x 914 mm x 1524 mm)	50
1/2" x 36" x 6' (12.7 mm x 914 mm x 1829 mm)	50*
1/2" x 36" x 8' (12.7 mm x 914 mm x 2438 mm)	30
1/2" x 48" x 8' (12.7 mm x 1219 mm x 2438 mm)	30
5/8" x 36" x 5' (15.9 mm x 914 mm x 1524 mm)	40
5/8" x 48" x 8' (15.9 mm x 1219 mm x 2438 mm)	24
3/8" x 48" x 8' (9.5 mm x 1219 mm x 2438 mm)	40*
1/4" x 48" x 8' (6.4 mm x 1219 mm x 2438 mm)	20*
<b>PermaBase Underlayment</b>	
1/4" x 48" x 4' (6.4 mm x 1219 mm x 1219 mm)	60
1/4" x 36" x 5' (6.4 mm x 914 mm x 1524 mm)	60

\* Special Order

For installation instructions and accessories, see page 12.

## PermaBase BRAND PLUS Cement Board

# Lighter, Faster And Easier

### When You Want The Best Lightweight Rigid Substrate:

#### PermaBase BRAND PLUS Cement Board

This board has the same exceptional qualities built into PermaBase Cement Board but weighs 25% less. When you need to lighten your load, consider PermaBase PLUS for all interior and exterior applications.



#### Resists Moisture Better

- Stays intact when exposed to water: will not rot, disintegrate or swell – built for the long run.
- Achieves the industry's lowest water-absorption rating (ASTM C473) – offering better installation.
- Helps inhibit mold growth with the highest possible score on mold tests (ASTM D3273 and ASTM G21).



#### Stays Strong And Lasts Long

- Resists impact and remains dimensionally stable – extending the life of your project.
- Holds up to the toughest conditions.



#### Installs Fast And Easy

- Lightweight and easy to cut – speeding up installation.
- Reduces jobsite waste – easier, cleaner cut.
- Patented EdgeTech<sup>®</sup> Technology allows for a closer edge fastening and reduces damage from handling.



#### Works For Interior And Exterior Projects

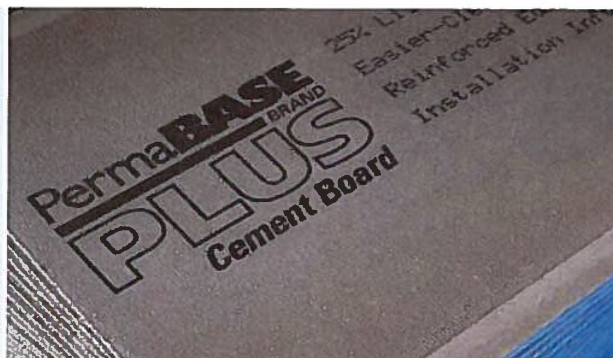
##### – One Panel, Many Applications

- Great for all interior applications, as well as exterior decks and outdoor kitchens.
- Meets UL & ULC classifications for one- and two-hour fire-rated assemblies.
- Building code approved – one substrate that does the job of many.
- Adhere tile, stone or thin brick directly to PermaBase PLUS in exterior applications – saving time and money.
- Durable substrate for direct-applied coating systems.



#### Offers Best In Class Warranty

- Lifetime Limited Warranty: Interior applications.
- 15-Year Limited Warranty: Exterior applications.



Perma**BASE**  
BRAND  
**PLUS**  
Cement Board

#### SIZES AND PACKAGING

Size: Thickness, Width And Length	# Of Pcs Per Unit
7/16" x 36" x 5' (11.1 mm x 914 mm x 1,524 mm)	60
1/2" x 48" x 8' (12.7 mm x 1,219 mm x 2,438 mm)	40
5/8" x 48" x 8' (15.9 mm x 1,219 mm x 2,438 mm)	32

For installation instructions and accessories, see page 12.

PermaBase BRAND UltraBacker Cement Board

# Smoother, Stronger, More Stable

## When You Want The Best Rigid 1/4-Inch Underlayment That Buys You More Open Time: PermaBase BRAND UltraBacker Cement Board

UltraBacker features a smooth mesh and mat surface. The 1/4-inch thickness eliminates the need to modify adjacent thresholds when abutting it to carpet, hardwood and other common flooring materials.



### Resists Moisture Better Than Any Other Cement Board

- Features the *lowest water-absorption rating of <8% (ASTM C473)* – offering better installation.
- Stays intact when exposed to water: will not rot, disintegrate or swell – built for the long run.
- Helps inhibit mold growth with the highest possible score on mold tests (ASTM D3273 and ASTM G21).



### Stays Strong And Lasts Long

- Resists impact and remains dimensionally stable – extending the life of your project.
- Holds up to the toughest conditions.
- 30% stronger and four times more rigid than competitive 1/4-inch cement board.



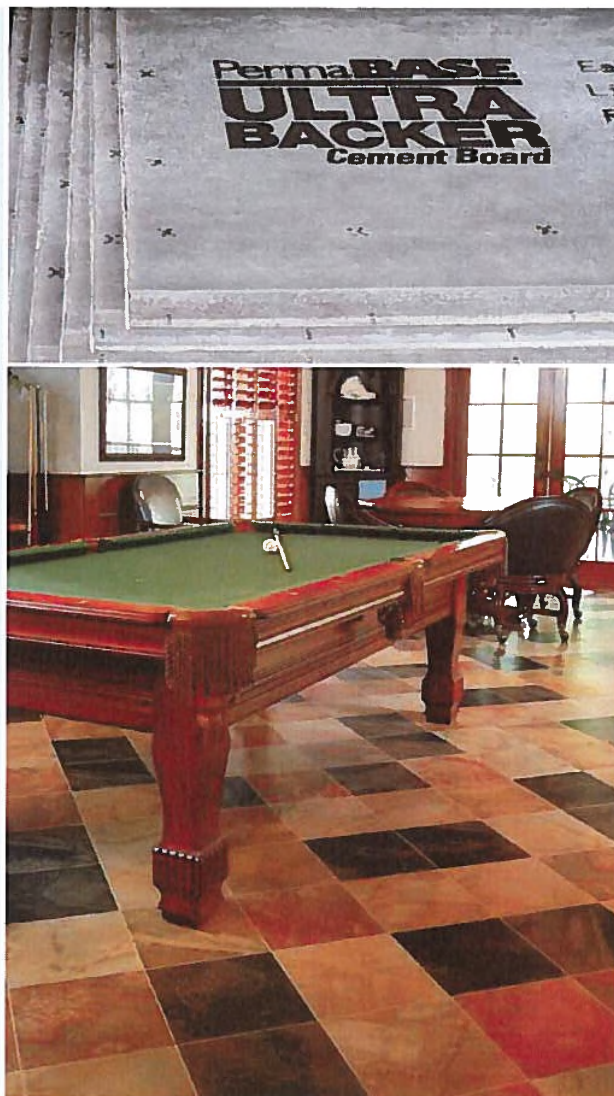
### Installs Fast And Easy

- Can be applied over new or existing countertops or as a flooring underlayment – pre-manufactured panels save you time.
- Reduces jobsite waste – easier, cleaner cut.
- Patented EdgeTech<sup>®</sup> Technology allows for a closer edge fastening and reduces damage from handling.



### Offers Best In Class Warranty

- Lifetime Limited Warranty: Interior applications.



Perma**BASE**  
BRAND  
**ULTRA  
BACKER**  
Cement Board

#### SIZES AND PACKAGING

Size: Thickness, Width And Length	# Of Pcs Per Unit
1/4" x 36" x 5' (6.4 mm x 914 mm x 1524 mm)	60

For installation instructions and accessories, see page 12.