

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

DATE OF AUTHORIZATION
BMEC AUTHORIZATION
BMEC APPLICATION

OCTOBER 31, 2002
BMEC # 02-07-278
A2002-13

The Waterless No Flush™ Urinal

1. Applicant

Matrix Environmental Partners Inc.
3-331 Trowers Road
Woodbridge, Ontario
L4L 6A2

(905) 850-8080
(905) 850-9100

2. Manufacturing Facilities

Fibreall Industries
92 North Port Road
Port Perry, Ontario
L9L 1B2

3. Description

Matrix Environmental's Waterless No Flush™ Urinal (The "Waterless Urinal") is a plumbing fixture designed to be used in a washroom lieu of a conventional urinal.

The Waterless Urinal is comprised of 5 parts: 1. Urinal Body: the urinal body is gel-coated using a polymer gel-coat, the body is re-enforced with a chopped strand fibreglass mat. Waterless Co. Model numbers 2003, 2003B, 2004 and 2004B: Kalahari and Sonora. 2. The Trap: the removable trap is made of low density polyethylene with white concentrate and fits into the urinal body to accept the urine. Waterless Co. part number 3001: EcoTrap®. 3. The Trap Retainer: the trap retainer is a 4"x 2" ABS reduced coupling, the removable trap fits into the trap retainer. Canplas model number 3025. 4. The Elbow Outlet: the elbow outlet is a 2" ABS 90° elbow, that fits into the trap retainer and allows the urine to flow to the drain. Canplas model number 2452. 5. The Trap Seal: the trap seal is a specifically formalized trap seal liquid with a specific gravity lower than urine, approximately 0.9 litres of this liquid is used in the trap. The trade name for this liquid is Blueseal®, Waterless part number 1114.

4. Authorization Requested

The applicant sought authorization for the use of their product as a waterless urinal in buildings of all types of construction wherever conventional urinals, as described in Article 7.6.4.2. of the 1997 Ontario Building Code (OBC), would be permitted to be installed under the of the OBC.

5. Assessment

Reports and assessments provided by the applicant show that if the Matrix Environmental Waterless No Flush™ Urinal is designed, performance tested and maintained in accordance with the manufacturer's limitations and instructions stated in this authorization, the level of performance required by the OBC for conventional urinals will be provided:

Reports submitted and reviewed:

1. Technical Background Information Memo (TBI) relating to the The Waterless No Flush™ Urinal, dated September 23, 2002.
2. Reference Drawing, "The Waterless No Flush™ Urinal."
3. Reference Drawing, "EcoTrap®."
4. Water Matrix Inc. Specifications No Flush™ Urinal, Sonora™ Model#2004, dated June 2002.
5. Water Matrix Inc. Specifications No Flush™ Urinal, Sonora™ Model#2004B, dated June 2002.
6. Water Matrix Inc. Specifications No Flush™ Urinal, Kalahari™ Model#2003, dated June 2002.
7. Water Matrix Inc. Specifications No Flush™ Urinal, Kalahari™ Model#2003B, dated June 2002.
8. Water Matrix™ Kalahara™ No Flush™ Urinal, Installation Instructions.
9. Water Matrix™ Sonora™ No Flush™ Urinal, Installation Instructions.
10. Water Matrix™ "Waterless No Flush™ Urinals Maintenance Instructions: Blue Seal® Refill."

11. Water Matrix™"Waterless No Flush™ Urinals Maintenance Instructions: EcoTrap® Exchange."
12. Production Flow Chart: Fibreglass Waterless Del Nar Urinal: dated 8/1/98.
13. Waterless Co. "Urine, No-Flush Urinals, and Sanitation: A Review", dated 10/24/94.
14. List of Standards and Listings: Waterless No-Flush™ Urinals.
15. American National Standard, ANSI Z124.9 1994, excerpt "For Plastic Urinal Fixtures."
16. Canadian Standards Association (C.S.A.)"Certificate of Compliance #1087090 (LM 103698-1) for ANSI Z124.9, dated March 30, 2001.
17. C.S.A. "Description and Test Report", dated March 30, 2001.
18. 1996 National Standards Plumbing Code, Section 7.5 "Urinals."
19. IAPMO Research and Testing, Inc, Classified Marking, accepted June 2000.
20. Letters of Approval:
 - (a) New York State, Department of Environmental Conservation, dated 03/25/95.
 - (b) California Energy Commission, dated December 21, 1993.
 - (c) Washington Suburban Sanitary Commission, dated February 2, 1994.
 - (d) City and County of Honolulu, Department of Planning and Permitting, dated April 26, 1999.
 - (e) Texas Natural Resources Conservation Commission, dated January 21, 1999.
 - (f) Seattle-King County Department of Public Health, dated August 25, 1994.
 - (g) Whatcom County Planning and Development Services, dated October 10, 1994.
 - (h) State of Wisconsin, Department of Industry, Labor and Human Relations, dated February 10, 1995.
 - (i) State of Maine, Department of Human Services, February 22, 1995.
 - (j) State of Utah, Department of Commerce, Division of Occupational & Professional Licencing, dated April 27, 1995.
 - (k) The Commonwealth of Massachusetts, Division of Registration, dated March 13, 1997.

- (l) Oregon, Department of Consumer and Business Affairs, dated May 5, 1994.
 - (m) Michigan Department of Consumer & Industry Services, dated 12, 2000.
 - (n) State of Maryland, Department of Labor, Licensing and Regulation, dated December 20, 1999.
 - (o) State of Michigan, Department of Consumer & Industry Services, dated July 14, 2000.
 - (p) City of Las Vegas, Department of Building and Safety, dated May 20, 1994.
 - (q) County of San Diego, Department of Health Services, dated May 18, 1994.
 - (r) Bellingham Fire Department, Building Services Division, November 22, 1994.
 - (s) Snohomish County, Planning and Development Services, dated January 20, 1996.
 - (t) City of Toronto, Department of Works & Emergency Service, dated September 25, 2002.
20. SGS Testing Company, Report No. TS97-0229R, Revised July 31, 1997.
 21. Report prepared by Owen Ayres & Associates, Inc. "An Evaluation of the Hydraulic Performance of a Waterless Urinal", dated December 8, 1994.
 22. Report of Test #602687-1R, " The Review of EPA Discharge Criteria for 'Blue Seal' Liquid for 'Waterless Urinals'" revised March 23, 1993.
 23. Material Safety Data Sheet for Blue Seal®.
 24. Municipal Letter: City of Aurora, CO, USA, Department of Water Supply and Treatment, dated March 28, 1995.
 25. Municipal Letter: Cobb County Water System.
 26. Record of Environmental Consideration (REC), Installation of Waterless Urinals, Fort Huachuca, Arizona, dated April 22, 1997.
 27. Vancouver Island Technology Park: Green Building Plan.

6. Authorization

The Waterless No Flush™ Urinal is authorized for use as a urinal in all locations, in buildings of all types of construction wherever a conventional urinal, as described in Article 7.6.4.2. of the OBC, would be permitted to be installed.

A. Specific Terms and Conditions

1. This authorization is valid only for Matrix Environmental Partners Inc.: The Waterless No Flush™ Urinal.
2. A copy of the maintenance instructions for the Blueseal® Refill and the Ecotrap® Exchange shall be submitted along with this BMEC Authorization when applying for a building permit.
3. A permanent sign in a conspicuous location indicating the maintenance schedules, as they are referenced in 6.A.2. of this Authorization, shall be posted in each room that a Waterless Urinal is installed.
4. The Waterless No Flush™ Urinal must be marked indicating that it conforms to ANSI.Z124.
5. The Waterless No Flush™ Urinal shall be installed in accordance with the manufacturer's instructions.
6. The manufacturer shall provide training of the proper use, operation and maintenance of the device.
7. The plumbing system that the Waterless No Flush™ Urinal forms a part of shall be designed as per section 7.5. "Venting" of the OBC.
8. The Waterless No Flush™ Urinal shall be connected to a drain waste pipe that is designed as per Subsections 7.4.9. and 7.4.10. of the OBC.
9. The Waterless No Flush™ Urinal is considered to have satisfied the requirements of Subsection 7.2.3. of the OBC when:
 - (a) installed with an EcoTrap® as described Part 3 of this Authorization, and
 - (b) used in conjunction with the manufacturer's trap seal liquid, as it is specified in 6.A.11. of this authorization,
10. Double trapping of the Waterless No Flush™ Urinal is not permitted.
11. The Waterless No Flush™ Urinal shall be used in conjunction with the manufacturer's Blueseal®, or other similar liquids approved by the manufacturer.
12. The Waterless No Flush™ Urinal shall conform to the flame spread and smoke development requirements of the OBC.

B. General Conditions

1. The use of The Waterless No Flush™ Urinal as described in 6. A. Specific Terms and Conditions No. 1. must comply with the *Building Code Act, 1992* as amended or re-enacted from time to time and except as specifically authorized herein, with the Ontario Building Code as amended or remade from time to time.
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 6. A. above; or
 - (b) the occurrence of any of the events described in Conditions 6. B. 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 *Building Code Act, 1992* 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 Ontario Building Code provision relevant to this Authorization has been amended or remade.
5. Where the Commission receives additional information concerning the material, system or building design authorized herein, the Commission may review this Authorization and the Commission may after the review amend or revoke this Authorization as in the opinion of the Commission may be necessary.

at Toronto this 31st day of October 2002.

BUILDING MATERIALS EVALUATION COMMISSION

Rashmi Nathwani, Chair