1.0 PURPOSE
The purpose of this report is to present the testing methods employed and test results obtained during the performance testing of one (1) Thermally Broken Aluminum Casement Window described in paragraph 4.0 of this report.

2.0 TEST REFERENCES
2.1 American National Standards Institute Specifications ANSI/AAMA 101 - 93: C - HC 65

3.0 SUMMARY
The test results in paragraph 5.0 indicate that the test sample described in paragraph 4.0 of this report complied with the performance requirements of the above referenced specifications.

4.0 SAMPLE SUBMITTED
SERIES: YUKON 5000T Casement Window
CONFIGURATION: One vent adjacent to horizontally stacked fixed lite.
FRAME SIZE: 72.50" x 50.50"
VENT SIZE: 24.18" x 48.38"
FIXED SIZE: 44.00" x 46.63" Daylight Opening
GLASS: The fixed lite consisted of single glazed 3/8" annealed glass. The vent contained single glazed 1/4" annealed glass. The fixed lite rested on setting blocks siliconed in place at quarter points, and one block at the midspan of all other sides. The vent lite contained a setting block at each side of the bottom rail to hinge stile corner and the same on the top rail to lockstile corner.
GLAZING: The lites were glazed to their respective frame and vent members from the inside as follows:

a) Tape glazed with double sided foam tape.
b) Wet glazed with a heel bead of silicone along the outside perimeter of the glass, and with a full bead of silicone on the inside perimeter of the glass.
GLAZING (cont'd):

c) Secured in place along the inside perimeter with extruded aluminum snap-in beads.

WEATHERING:

The vent and the frame opening each contained a continuous bulb vinyl full perimeter. The snap-in glazing beads contained a bulb vinyl.

WEENAGE:

Four inches from each end and three inches to each side of the mullion, the sill contained a 1" x .18" weep slot. Each weep contained a snap-in nylon cover that drained the water down.

HARDWARE:

The vent contained a multi - 3 point lock with the activator located 12 inches from the bottom and fastened to the mullion with a pair of #10 x 5/8" PPH screws. The lock engaged plastic keepers at 6.25 inches from each end of the lockstile and one (1) at midspan.

The vent was supported in the frame with a pair of butt hinges 6 -1/8 inches from each end of the hinge jamb. The hinges were each fastened with three (3) screws to the vent and three (3) screws to the frame.

The sill contained a roto operator fastened to the sill with four (4) #10 x 0.63" PFH screws. The operator track was fastened to the vent bottom rail with a pair of #10 x 0.38" PPH screws.

CONSTRUCTION:

The frame corners and vent corners were keyed and welded. The intermediate frame mullion was welded.

ANCHORING:

The frame was secured in place full perimeter, with wood furring on both sides.

CAULKING:

a) All vent corners full profile.
b) All frame and intermediate mullion joints full profile.
c) All lock and keeper screws.
d) Frame perimeter to wood framing.

5.0 TEST PROCEDURES AND RESULTS

5.1 All testing procedures were performed in accordance with the performance requirements of the test specifications referenced in paragraph 2.0 of this report.

5.2 TEST RESULTS

<table>
<thead>
<tr>
<th>PARAGRAPH</th>
<th>TEST DESCRIPTION</th>
<th>MEASURED</th>
<th>ALLOWED</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.2</td>
<td>Air Infiltration (ASTM E 283)</td>
<td>6.24 PSF</td>
<td>.04 CFM/FtCL</td>
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<td></td>
<td></td>
<td></td>
<td>.37 CFM/FtCL</td>
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<tr>
<td>2.1.3</td>
<td>Water Penetration (ASTM E 547 &amp; ASTM E 331)</td>
<td>6.00 PSF</td>
<td>No Leakage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.0 PSF</td>
<td>No Leakage</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>No Leakage</td>
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</table>
### 5.2 TEST RESULTS (cont'd)

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<thead>
<tr>
<th>PARAGRAPH</th>
<th>TEST DESCRIPTION</th>
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<th>ALLOWED</th>
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<tbody>
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<td>2.1.4</td>
<td>Uniform Load Structural (ASTM E 330)</td>
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<td></td>
<td>60.0 PSF POS</td>
<td>60.0 PSF NEG</td>
<td>- 0.00&quot;</td>
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<td></td>
<td>97.5 PSF POS</td>
<td>97.5 PSF NEG</td>
<td>+0.00&quot;</td>
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<tr>
<td>2.2.2.6.1</td>
<td>Vertical Deflection Test</td>
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<td>.500&quot; Defl.</td>
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<tr>
<td>2.2.2.6.2</td>
<td>Hardware Load Test</td>
<td>No Damage</td>
<td>No Damage</td>
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<tr>
<td>2.2.2.6.3</td>
<td>Torsion Test</td>
<td>0.88&quot;</td>
<td>1.50&quot; Defl.</td>
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</table>

Detailed assembly drawings showing wall thickness of all members are on file and have been compared to the sample submitted. Test sample sections and a copy of this report will be retained at the laboratory for four years.

The above test results were obtained by using the applicable ASTM Test Methods. This report does not constitute Certification of this product. Certification can only be granted by an approved Administrator/Validator.

Testing Completed: April 25, 1997  
Report Completed: April 29, 1997  
Report Reissued: July 5, 1998 due to the clarification of Water Penetration Test Results.

Pete Cruz  
Test Engineer

Jim Cruz  
Test Technician