

DEPARTMENT OF FORESTRY AND FIRE PROTECTION

5500 Price Avenue
McClellan, CA 95652-2421
(916) 561-3330
Email: dan.lang@fire.ca.gov
Website: www.fire.ca.gov

January 24, 2007

Mr. John Bartlett, President
Barricade International, Inc.
12848 SE Suzanne Drive
Hobe Sound, Florida 33455

Dear Mr. Bartlett:

At your request the California Department of Forestry and Fire Protection (CDF) conducted a Field Operational Evaluation of Barricade II fire blocking gel as applied by CDF Grumman S2T airtankers to wildland fires during our 2006 fire season. CDF conducts such evaluations when we believe that a product may offer us a cost-effective alternative to other wild land fire suppressant products that we currently use. We have conducted several such evaluations of other vendor's products since 2001.

Our decision to conduct the field operational evaluation of Barricade II was based on the fact that the product has been evaluated by the Wildland Fire Chemical Systems (WFCS) program of the USDA Forest Service and found to be safe for use by firefighters, and safe for the environment and the public. As a result of this evaluation, Barricade II is listed on the WFCS "Qualified Products List" (QPL) of water enhancing fire suppressant chemicals.

Our decision was also based on the results of airtanker drop tests of Barricade II conducted by the USDA Forest Service and CDF at Evergreen Air Park in Marana, AZ during November of 2005. Those tests showed that when dropped from a CDF S2T airtanker at normal speed and height above ground level, Barricade II can deliver a pattern on the ground that is very similar to the long-term fire retardant products that CDF has used for the past 40 years.

Barricade II fire blocking gel was evaluated at our Columbia Air Attack Base in Columbia, California from July 4 through August 10, 2006. Barricade II was the only fire suppressant product used in airtankers loading at Columbia during that period. The evaluation was conducted by two CDF Air Tactical Group Supervisors who directed the aerial firefighting operations, and by the pilots of the airtankers that dropped the product. All of these individuals have at least 15 years of aerial firefighting experience. Evaluations were also conducted by firefighters on the ground, who submitted evaluation forms following the fires where Barricade II was used. While these evaluations are subjective, they also compare Barricade to similar products used by the evaluators during 2005. We believe that the knowledge and experience of these evaluators provides sufficient credibility upon which to base our conclusions.

Mr. John Bartlett
Page 2
January 24, 2007

During the evaluation a total of 122,029 gallons of mixed Barricade II was dropped on 85 wildland fires. The evaluators were pleased with the "flyability" of the product, meaning the way that the liquid mass holds together against the effects of wind shear and drift that it encounters as it falls from the airtanker on to the target. They were also pleased with the fire suppressing effectiveness of Barricade II once it reached the ground. They felt that Barricade II performed better overall than the long-term fire retardant products that they had previously used.

The firefighters on the ground stated that the consistency of Barricade II was very good, and better than some other products they evaluated previously. They believed that this is because Barricade II contains smaller polymer particles than some other products, which resulted in better blending with the water and other ingredients. They also felt that it provided a more uniform coating of the vegetation that it was dropped on, and that it remained in place longer on sloping and vertical vegetation surfaces than some other products. This resulted in a better resistance to ignition than some other products until the water evaporated from the dropped load. After that, as with other polymer-based water enhancers, the product no longer provided any resistance to ignition.

We feel that Barricade II can be effective in tactical firefighting situations where direct attack on the flaming front by airtankers and/or helicopters is possible, provided that ground forces can reach the drop area before all moisture has evaporated.

In summary, we feel that Barricade II is a superior wildland fire suppressant product and can help us to more quickly achieve our fire control objectives. If Barricade II can also be a cost-effective alternative to other products we currently use, it may well become our product of choice.

The California Department of Forestry and Fire Protection makes no endorsements of any fire suppressant chemical products, and this evaluation may not be quoted, in whole or in part, in any way that implies such an endorsement. We thank you for the opportunity to evaluate Barricade II, and we hope that it will prove to be a cost-effective tool that will help us to improve the level of wildland fire protection that we provide to the citizens of California.

Sincerely,

Daniel J. Lang
Staff Chief
Wildland Fire Chemicals Program Manager

cc: J. Richardson
M. Padilla
L. Holsapple