

FOR IMMEDIATE RELEASE

September 17, 2007

Powder Springs, GA.

RICOWI releases Hurricane Katrina Report on roofing investigations.

Finding: Roofs designed and detailed according to current codes and standards for installation in high wind areas will perform satisfactorily.

The Roofing Industry Committee on Weather Issues, Inc. (RICOWI) Executive Director, Patty Wood-Shields, said "the RICOWI Board of Directors formally released the approved Hurricane Katrina Report at its roofing seminar held on September 6, 2007 in New Orleans." Attendees received a CD copy of the report. Dave Roodvoets and Rick Olson presented findings on low and steep slope roof investigations.

A logistics team was dispatched immediately following landfall (August 29, 2005) to conduct aerial surveillance, target sites and prepare for the six teams. Twenty-five expert wind engineers, roofing material specialists, insurance analysts, structural engineers, and roofing consultants investigated a combined total of 82 low and steep sloped roofs in the damaged areas of Mississippi and Louisiana. The teams collected specific information on each building examined, including the type of structure (use or occupancy), wall construction, roof type, roof slope, building dimensions, roof deck, insulation, roofing material, construction, and method of attachment. In addition, the teams noted terrain exposure and the estimated wind speeds at the building site from wind speed maps provided by Applied Research Associates.

RICOWI Chair Rick Olson, said "many of the observations for Katrina were very similar to and further validate our findings for Hurricanes Charley and Ivan. Many roof design professionals do not seem to properly understand and incorporate the total wind uplift forces that affect not only the roofing system but the roof deck as well. Our Katrina Report tries to further address these issues."

Systems installed according to the latest codes and manufacturers' specifications generally resisted damage from winds. RICOWI investigations have found some common problems in the low and steep slope roofs they have investigated after three hurricanes. Dave Roodvoets, Field Coordinator for the investigations, said "in many cases low slope roofs have had poor securement of edge metal that resulted in significant damage to the roof plus emitting dangerous sharp debris during the storms. Roofing systems often fail in the peel mode: the system is lifted until the weakest layer is damaged, and then the layers above are peeled off like the skin of an orange. It has also been shown that debris can puncture even the toughest systems. This leads to the conclusions that roofs need to be designed as partially enclosed systems, as that is normally the case during a hurricane. The edge metal needs to meet the current code requirements for securement (design and installation in accordance with ANSI/SPRI ES-1). Testing of systems should also investigate their potential for peel." He further stated that "steep slope roofs have also had similar problems with improper edge detailing. Asphalt shingled roofs also have a peeling phenomena when they are installed using the racking method of installation that is common in the south. Good design and installation meeting the current building codes, following manufacturers' guidelines and using compliant edging systems are likely to result in most roofs surviving major wind events."

The Wind Investigation Program is facilitated by Oak Ridge National Laboratory / Department of Energy. André Desjarlais, ORNL Buildings Technology Center, stated "data from these investigations will lead to more energy efficient and durable roofing systems and a reduction in insured losses, which may lead to lower overall costs to the public."

The RICOWI 183 page report may be ordered on CD (nominal postage & handling fee) or can be downloaded at no charge from the RICOWI website. The Report gives special recognition to the Roof Consultants Institute Foundation for a grant to supplement the publication costs.

RICOWI and ORNL / DOE have renewed their Cooperative Research and Development Agreement and are prepared to conduct another hurricane investigation event. RICOWI's new data base software for the teams' report writers will improve data input in the field and accelerate the production of future reports.

The Roofing Industry Committee on Weather Issues, Inc. (RICOWI) is a nonprofit organization established in 1990 to identify and address important technical issues related to the cause of wind and weather damage. For further information contact RICOWI's Executive Director, Patty Wood-Shields: Phone 770-726-7194; Email paws01@ricowi.com or visit RICOWI's website: www.ricowi.com.

Editor: Condensed version of the above release.

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Finding: Roofs designed and detailed according to current codes and standards for installation in high wind areas will perform satisfactorily.

Finding: Similar design and installation mistakes were observed in RICOWI's investigations after Hurricanes Charley, Ivan and Katrina.

The Wind Investigation Program is facilitated through André Desjarlais at the ORNL Buildings Technology Center of Oak Ridge National Laboratory / Department of Energy. It is sponsored by industry associations and supported by the volunteer efforts of the investigators.

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