

Facts Surrounding the Formaldehyde Issue

BACKGROUND

Soon after the devastating hurricanes in the Gulf Coast area left thousands of people homeless in 2005, the federal government responded by purchasing existing travel trailers and ordering thousands of trailers and manufactured homes for temporary housing.

The recreational vehicle and manufactured housing industries responded quickly. Fleetwood, a leader in both industries, participated by manufacturing more than 10,000 trailers and approximately 3,000 homes made to FEMA's specifications, most of which were completed by the end of calendar 2005.

Certain of the people who lived in some of the trailers have claimed that they developed symptoms due to the wood products (which contain formaldehyde) used in the construction of the units. Symptoms that can sometimes be caused by exposure to high levels of formaldehyde include eye, nose and throat irritation, headache, nausea, and a variety of asthma-like symptoms. Some have claimed fear of contracting other diseases, including cancer, but the science on those claims is very much in dispute.

Several different plaintiffs filed claims against a variety of defendants, including the manufacturers of the emergency living units, beginning in 2006. In October 2007, all of the federal court lawsuits were consolidated into a proceeding in New Orleans federal court. The Court set a deadline for the plaintiffs to file a consolidated complaint in March 2008.

The various industry trade groups have been working to respond appropriately by educating Congress and consumers about the science surrounding the use of formaldehyde-containing products in everyday life. In December 2007, the federal government began testing the trailers for formaldehyde levels. The Center for Disease Control (CDC), in conjunction with FEMA, conducted tests on 519 of the occupied FEMA trailers, park models, and manufactured homes from December 2007 to January 2008.

Although government standards vary, the Organization for Economic Cooperation and Development released a study in 2004 that set a threshold for mild symptoms to occur at levels exceeding 0.3 ppm. Only one of the 82 Fleetwood FEMA trailers that were tested by CDC exceeded that level.

ABOUT FORMALDEHYDE

Formaldehyde is not some scary chemical that was developed by manufacturers of travel trailers and manufactured homes.

Formaldehyde is a naturally occurring organic compound that exists in plants, foods, blood, and the atmosphere. Humans have naturally occurring enzymes that quickly break down formaldehyde, allowing for complete excretion.

The conventional wood products found in the construction of site-built homes, manufactured homes, commercial buildings, and other structures contain formaldehyde because it is in the glues and adhesives necessary to create pressed wood products. The levels can be elevated by the addition of certain furniture, carpets and curtains, as well as common household factors such as tobacco smoke, household cleaners, antiseptics, dishwashing liquids, fabric softeners, carpet cleaners, glues, adhesives and lacquers.

The release of formaldehyde fumes dissipates over time. Ventilation is helpful in speeding up the dissipation process.

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FLEETWOOD'S PRODUCTS

Formaldehyde levels in the travel trailers that Fleetwood provided in 2005 and 2006 for emergency shelter for victims of Hurricanes Katrina and Rita were lower than the average levels found in other homes in Louisiana. A 1998 study performed through Tulane University's Department of Environmental Health Sciences showed that 71 percent of the air samples taken from site-built homes in Southern Louisiana had indoor formaldehyde airborne levels that exceeded the levels set by the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE). The average formaldehyde level in all of the Fleetwood housing units tested by the CDC was less than half the level set by ASHRAE.

The HUD-Code standard, which was instituted in 1976 for manufactured housing, was amended in 1985 to create a maximum formaldehyde emission requirement for wood products. Shortly thereafter, Fleetwood began using lumber products that met HUD-Code standards in its travel trailers as well, even though there is no government standard mandated for RVs. Fleetwood made this decision, despite the higher cost of these products, to enhance the safety and comfort of its customers. The Company has not deviated from this practice, even when Fleetwood committed to produce thousands of trailers as quickly as possible to meet the emergency needs of the hurricane victims.

In July 2004, the Manufactured Housing Institute (MHI) published a study prepared by the Manufactured Housing Research Alliance entitled "Formaldehyde Concentrations in Manufactured Homes: The Current Situation." The study states that "A confluence of factors, including the post-1985 changes in the manufacture, selection and application of materials, the trend toward larger homes, and the requirement for whole house ventilation have all contributed to significant reduction in ambient formaldehyde levels." One section of the report states: "A review of empirical studies conducted since the implementation of the HUD rule suggest that levels of airborne formaldehyde in newly constructed manufactured homes are well below the scientifically established threshold for potential symptoms in most people according to the CPSC [U.S. Consumer Products Safety Commission] and others."

The Recreation Vehicle Industry Association (RVIA) adopted the HUD-Code standards for wood products for recreational vehicle use in December 2007 for all RVs manufactured in 2008 and beyond. The results of the CDC study show that Fleetwood's continued use of these products in its recreational vehicles, as it has done for the past 23 years, is positive for all concerned. When Fleetwood's trailers were tested by the CDC, the average formaldehyde levels found were approximately one-tenth of the targeted level set by HUD and just one-twentieth of the level established as 'safe' by OSHA. These satisfactory levels, which are far better than even the targeted levels, are consistent with the Company's expectations given the materials Fleetwood used and the age of the trailers tested.

The Center for Disease Control's study states: "Travel trailers from Fleetwood and Fleetwood CA [Fleetwood Canada] each showed statistically significantly lower levels of formaldehyde compared with the other travel-trailer strata combined, but they were not significantly different from each other." The full report, "Interim Findings on Air Quality in FEMA-Supplied Mobile Trailers," is available on CDC's [website](#). Of the 38 trailers tested that CDC designated as Fleetwood CA, only one had formaldehyde levels over 0.3 ppm, while none of the 44 other Fleetwood trailers tested at that level.

The CDC's results for manufactured housing produced for FEMA did not break down the test results for Fleetwood's homes.

ADDITIONAL INFORMATION

The Recreation Vehicle Industry Association has compiled additional information about formaldehyde on its [website](#).