

## **Interagency Task Force on Chinese Drywall**

### **Executive Summary of October 29, 2009 Release of Initial Chinese Drywall Studies**

#### **Overview**

The interagency task force on Chinese drywall is releasing today the initial results of several studies that begin to assemble pieces in the overall Chinese drywall puzzle. The investigation continues and additional reports will be released in November.

In sum, the three studies released today are:

- (1) *Elemental and Chemical Testing*: The study of the elemental and chemical composition of 17 drywall samples shows higher concentrations of elemental sulfur and strontium in Chinese drywall than in non-Chinese drywall.
- (2) *Chamber Studies*: Preliminary results of ongoing testing to detect gases emitted from drywall in laboratory chambers show higher emissions of total volatile sulfur gases from Chinese than from non-Chinese drywall.
- (3) *Indoor Air Studies*: Indoor air testing of 10 homes in Florida and Louisiana was conducted to identify and measure contaminants and to inform a drywall home indoor air testing protocol. This data from a small sample of homes, allows preliminary observations of certain chemicals in the indoor air. The tests did not detect the presence or found only very limited or occasional indications of sulfur compounds of particular interest – hydrogen sulfide, carbon disulfide, and carbonyl sulfide. Concentrations of two known irritant compounds, acetaldehyde and formaldehyde, were detected in both homes with and without Chinese drywall, and at concentrations that could exacerbate conditions such as asthma in sensitive populations. The levels of formaldehyde were not unusual for new homes, however, and were higher when the homes were not air conditioned.

The findings of each report released today must be considered within the limitations of each study and viewed in the context of the overall drywall investigation, which is ongoing. While the studies have discovered certain differences between Chinese and non-Chinese drywall, further studies must be completed to determine the nexus between the drywall and the reported health and corrosion issues. The conclusions of each study are preliminary and may be subject to change with the results of later studies.

Next month the results of a 50-home indoor air testing study will be released as well as a preliminary engineering analysis of electrical and fire safety associated with corrosion. The federal agencies involved in this effort are also working to finalize a recommended protocol for in-home testing which will be guided by the methods used to test the various homes to date. A study of long-term corrosion issues, that seeks to simulate decades of exposure and corrosion, will not be completed until June of 2010.

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\*Due to the interrelated nature of these investigations, these technical reports are being released in draft until the final results from further studies are available for interpretation. These studies are staff level documents and have not yet been reviewed or approved by the agencies participating in this investigatory effort.

## **Introduction**

An interagency task force, including both state and federal agencies, has been working in close coordination over the past several months to investigate reported corrosion and health issues related to Chinese drywall. The U.S. Consumer Product Safety Commission has served as the lead agency within the task force that has also included the U.S. Environmental Protection Agency, the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry, and the U.S. Department of Housing and Urban Development as well as the Florida Department of Health, the Louisiana Department of Health and Hospitals and the Virginia Department of Health, among others.

To date, nearly 1900 consumers have contacted the CPSC to report problems in their homes. The primary issues reported are: 1) corrosion, or blackening, of indoor metals, such as electrical components and central air conditioning system evaporator coils; and 2) various health symptoms, including persistent cough, bloody and runny noses, headaches, difficulty in breathing and irritated and itchy eyes and skin.

## **Scientific Investigation**

The scientific investigation has been a coordinated and multi-pronged effort to determine if there is a relationship between the Chinese drywall and the reported corrosion and health issues. The interagency task force on Chinese drywall is releasing today the initial results of several studies that begin to assemble pieces in this overall Chinese drywall puzzle. While the task force is releasing some results today, the scientific investigation continues.

The findings of each report released today must be considered within the limitations of each study and viewed in the context of the overall drywall investigation, which is ongoing. While the studies have discovered certain differences between Chinese and non-Chinese drywall, further studies must be completed to determine the nexus between the drywall and the reported health and corrosion issues. The conclusions of each study are preliminary and may be subject to change with the results of later studies.

Results of the following studies are being released today: 1) elemental and chemical testing; 2) chamber studies; and 3) indoor air studies.

### *Elemental and Chemical Testing*

The elemental and chemical testing of Chinese and non-Chinese drywall samples was undertaken to characterize the specific chemical composition of Chinese and non-Chinese drywall. The results were expected to identify differences between the two sets of drywall that might account for the reported corrosion and health issues. While the studies have discovered certain differences between Chinese and non-Chinese drywall, further studies must be completed to determine the nexus between the drywall and the reported health and corrosion issues.

Among the results found from the elemental and chemical analyses were the findings that among the samples tested, Chinese drywall contained higher concentrations of strontium and elemental sulfur than non-Chinese drywall. The analysis was conducted on 17 samples of drywall (Chinese and non-Chinese) collected from warehouses, suppliers and manufacturers. These samples were unpainted and uninstalled. The data and a statistical analysis are provided in Tab A.

### Chamber Studies

The chamber studies conducted by Lawrence Berkeley National Laboratory were intended to isolate the chemicals emitted from drywall. The studies are ongoing, but the preliminary findings are being reported. The studies were conducted on 17 uninstalled drywall samples (Chinese and non-Chinese) collected from storage warehouses, suppliers and manufacturers. These samples were unpainted and uninstalled. From these chamber studies, it was possible to isolate the drywall emissions from the interferences of other materials or furnishings in a house that might emit or absorb such emissions.

The preliminary results show that total volatile sulfur gases are emitted from Chinese drywall at a higher rate than non-Chinese drywall. The data and analysis presented here are preliminary results from an ongoing study of drywall emissions. As specific chemical characterization data become available from the chamber testing, a comprehensive exposure and risk assessment will be carried out. A full report on the chamber studies is provided in Tab B.

### Indoor Air Studies

Indoor air studies were conducted of a total of 10 homes to identify and measure contaminants and to inform the development of an indoor air testing protocol. The results of the air testing in this very small sample of homes is being reported today to offer a very preliminary indication of what compounds may be present in the indoor environments of homes in Florida and Louisiana with and without Chinese drywall. The 50-home indoor air study scheduled for release next month will provide a more comprehensive picture.

The indoor air studies did not detect the presence or found only very limited or occasional indications of sulfur compounds of particular interest – hydrogen sulfide, carbon disulfide, and carbonyl sulfide. In certain tests that measured additional compounds, concentrations of two known irritants, acetaldehyde and formaldehyde, were detected in both homes with and without Chinese drywall, and at concentrations that could exacerbate conditions such as asthma in sensitive populations. The levels of formaldehyde were not unusual for new homes, however, and were higher when the homes were not air conditioned. A full report on the indoor air studies is provided in Tab C.

### **Next Steps in the Scientific Investigation**

Next month the results of a 50-home indoor air testing study will be released as well as preliminary engineering analyses of electrical and fire safety associated with corrosion. A study of long-term corrosion issues, that seeks to simulate decades of exposure and corrosion, will not be completed until June of 2010.

The three studies released today, and the two additional reports scheduled for next month, once completed, will collectively help to develop a standard federal protocol for testing homes and to identify any possible connection between the presence of this drywall and the reported health and corrosion issues.

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