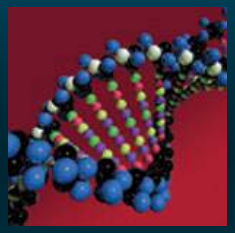
Key Considerations for the Repair of Structures With Defective Wallboard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Overview

- Removal of source materials
- Removal of ancillary building components impacted by source
- Final cleaning and ventilation prior to rebuild
- Potential pitfalls
- Remaining Building Products
- Occupational Thoughts
- Closing Comments

Source Removal

- Prior to source removal all personal possessions are removed
- Items for potential reuse (i.e., toilets, sinks, cabinets, etc.) can be removed and stored.
- Durable items remaining in place (i.e., tile) are protected
- In the majority of repairs all wallboard is removed from the affected residences

Removal of Ancillary Building Components Impacted by Source

- Insulation materials from walls and ceiling are removed
- HVAC system components are removed
- High and low voltage wiring systems are often removed
- Copper, brass and chrome plumbing components are removed

Final Cleaning and Ventilation Prior to Rebuild

- Following gross removal and pre-cleaning the environmental surfaces in the residence are cleaned by HEPA vacuuming
- Following final cleaning the home is allowed to ventilate
- Rebuilding begins after this period of ventilation

Potential Pitfalls

- Properly cap plumbing waste lines during repairs
- Oxidation of new copper materials Will Occur as it has since the evolution of oxygen in our atmosphere
- The reactions associated with corrosive drywall are primarily sulfide reactions not oxidation

Remaining Building Products

- Current evidence does not support cross contamination theories for remaining wood or cementitious products

Wood Products

- Extensively studied
  - Study design included controls
  - Analysis of samples does not support residual or cross-contamination theories

Sampling of wood from 54 homes previously constructed with corrosive imported wallboard does not demonstrate apparently elevated carbonyl sulfide residues reflecting residual gas from the wallboard. Levels are slightly lower than found in new wood products.

Wood Products

Cementitious Products

- **Extensively studied**
  - **Study design allowed for a period of equilibration**
  - **Samples of air from the chamber were collected using 1-liter tedlar bags and analyzed within 24 hours using ASTM D-5504**

Cementitious Shower Backing Board

Gypcrete Flooring Material

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Concrete Block Materials

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Cementitious Products

- No detections for sulfide gases were reported in the more than 80 chambers that were placed on cementitious products in homes that previously contained corrosive imported wallboard

Metal Framing Products

- Metal framing components have likewise been evaluated
  - mild oxidative effects are expected and may be observed given the continuous presence of oxygen
  - Observations via electron microscopy and energy dispersive x-ray analysis are not similar to those observations of affected metals such as copper

Truss Plates

Metal Framing Materials

Common Nails

Hurricane Strapping

Occupational Thoughts

- Affected wallboard is not unusual with respect to radioactivity
- Nuisance particulate is the most likely issue related to persons performing invasive evaluations and repairs

Closing Comments

- Repairs can be effectively and successfully conducted
- Exotic procedures do not appear warranted
- Objective evaluations of wood, metal and cementitious materials with representative controls do not indicate cross-contamination or residue issues

Closing Thought

- The structures were constructed by people and they can be repaired by people.