

## 25 Sigourney Street Questions and Answers

1. **Why does the building leak?**

All masonry is porous and water can get into the building. With good construction details and good workmanship, water is allowed to “weep,” or drain properly.

2. **Is the entire building affected, or only certain floors?**

Water penetration has occurred primarily on the upper floors. Floor 19,18,17 and 5 (occupied by Department of Revenue Services) have experienced more water infiltration than other floors. Phase I corrective action occurred 1999-2000 with repairs to roof copings and balconies which significantly minimized water incursion (by about 85 %). During 2000-2001, interim repairs to brickwork and caulking were executed until the design for permanent repairs (Phase II) could be completed. Phase II was completed end of 2003. It involved exterior work on all floors; interior sheet rock work was most extensive on 19,18,17 and 5 with very limited replacement on other floors that were known to have water incursion.

Roof leaks were a persistent problem for the 19<sup>th</sup> floor. A roofing study verified that the roof was at the end of it's useful life, funding was secured and it was replaced in 2003.

3. **What building materials are in the building?**

Exterior walls are constructed of brick, block, metal wall framing and sheet rock. Interior finishes are ceiling tiles, painted sheet rock walls and mostly carpet floors with some vinyl tile flooring.

4. **Does the ventilation system allow sufficient circulation of outdoor air inside the building?**

Yes. DPW has contracted with several environmental and HVAC engineers to evaluate the existing building systems, specifically fresh air. It was determined that ample fresh air is being introduced into the building. (The ASHRAE standard is 20 cubic ft./minute per occupant). NIOSH's consultant, EH & H, conducted further evaluations of this system and confirmed proper operation.

5. **Are changes to the ventilation system part of the remediation plan?**

The existing ventilation system was determined to be more than adequate. However, an engineering study recommended improvements be made to control pressurization (static pressure to minimize the “stack effect” which occurs in high rise buildings). Positive pressure is being maintained on the upper floors, which is desirable; however, it is more difficult to maintain control of the lower floors. Although pressurization did not appear to be related to health symptoms on the upper floors, the stack effect work was completed in 2002.

In addition, we have upgraded to a superior air filters for the entire building in 2002. Previous filtration was high efficiency, but we decided to install the next step higher which is capable of removing 94% of particulates larger than one (1) micron. (Mold spores are typically two-four microns).

Also, in 2004, energy management system improvements, including HVAC controls, were implemented.

6. **What exactly has been done, internally and externally to remove any wet, water-damaged, or otherwise water-affected materials?**

Externally, repairs were done to the window heads, flashing, caulking, glazed curtain walls and brick joints. An exterior sealer has been applied to the building envelope. This work commenced July 2002 and continued through 2003.

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Internally, water-damaged sheet rock (whether it exhibited mold or not) was removed after hours under full containment, negative pressure and HEPA filtration. This is the same method used for asbestos removal. In addition, DPW contracted an environmental company to monitor the contractor performing the after-hours remediation. A certified industrial hygienist was at the site with the remediation contractor to inspect the sheet rock as it was removed; conducted real-time particulate counting in and around the areas where gypsum board was removed; and documented the process to insure approved protocol was followed. Photographs were taken as part of the documentation.

**7. What has been done to make sure these materials or their replacements do not get wet again?**

The architect wrote specifications for quality materials and workmanship, and construction repairs were inspected as the work progressed.

After heavy rains, maintenance staff conduct interior perimeter inspections of historical problem areas. We are having periodic inspections by professionals at least twice a year to determine whether there are cracks or signs of external deterioration requiring repair.

**8. Can the building be made completely watertight and dry?**

This is our goal. "Completely" is the keyword. Masonry is a porous product and good building construction and maintenance is required in order to maintain a dry building. The extensive repairs should maximize the performance of the building envelope. If minor leaks do occur, they will be promptly taken care of.

The NIOSH consultant states, "As with any building of this size, small leaks are going to occur from time to time and building management must adapt a program to monitor their frequency and persistence." DPW has implemented an inspection system and is addressing this.

**9. At what cost?**

About \$ 7.4 M for the major work components.

**10. What actions are planned?**

We will review the updates and final report issued by NIOSH and will take actions, as appropriate. NIOSH intends to alert us if they identify areas of risk requiring immediate intervention, prior to issuing the final report. NIOSH has advised that they will be visiting the end of Jan 2005 to report their review of the health questionnaire of building occupants conducted last summer. Their final report is expected during the summer of 2005 and will address environmental data and health evaluations. We also will continue to be proactive in building maintenance and responding to occupant concerns and issues.

**11. Are there standards for landlords to follow to ensure a safe environment?**

As a landlord we attempt to follow all established standards and guidelines regarding the proper maintenance and operation of the building. These include:

- ❖ The Carpet and Rug Institute for cleaning carpets and responding to water/flood damage,
- ❖ ASHRAE (American Society of Heating Refrigeration and Air Conditioning Engineers) for ventilation systems
- ❖ NY City guidelines for removal of the wallboard
- ❖ EPA has many documents on managing indoor air quality, like "Tools for Schools",

standards for small and large commercial buildings, indoor air management techniques. DPW tries to buy products that are not environmental harmful and generally attempts to follow green label products advised by EPA

- ❖ There are also rules for construction activities in an occupied space (e.g. how to protect people, plastic sheeting around all construction). These include the guidelines by the Sheet Metal Association and other groups.

NOTE: But there are few standards and guidelines regarding mold. There are no established standards to what is harmful and what isn't. Or how much of something is harmful. It is hard to isolate the cause and people may have preexisting conditions that exacerbate this. Here is what we do know: water damaged materials should be replaced and the cause of major water infiltration corrected.