FAQ: Indoor Air Quality Testing Results for St. Johnsbury AHS Offices

Updated April 4, 2017

What were the results of the indoor air quality testing?

A preliminary soil investigation under the St. Johnsbury AHS Offices, conducted as part of a real estate transaction, identified the presence of several chemicals of potential concern. There was concern over the presence of these chemicals in the soil because we know when they are present in the soil they often enter buildings through a process called "vapor intrusion", meaning they leak slowly through the buildings' foundation into office or residential spaces above.

As a result, the property owner's consultant tested indoor air quality for three contaminants: perchloroethene (PCE), trichloroethene (TCE), and chloroform. The indoor air sampling show that PCE and TCE are present above the Health Department's 'level of concern' in two of three buildings (#1 and #2). Chloroform is present slightly above a level of concern in only one of the buildings (#1).

How does soil vapor come through the building?

Soil vapors enter the air space of a building through cracks, piping, and other openings in a building's structure. Soil vapors can also pass through concrete slabs and foundations, because concrete is porous. Air circulation and pressurization in a building can also affect how much soil vapor is pulled into a building.

What is the source of the contamination?

PCE, TCE, and chloroform are contaminants typically associated with historic dry cleaning operations and other industrial uses. There is a public record indicating the presence of a dry cleaner at the office building site, which was in operation from 1927 until the early 1970's. Further site investigation by the property owner's environmental consultant is required to make a final determination if the contaminants found in the soil and indoor air are linked to the past dry cleaning use.

How long were employees in the building exposed to the chemicals?

The State of Vermont has been leasing this office space in St. Johnsbury for approximately 30 years. Employees have served in this building between 1 to 30 years.

When did the testing occur?

Sampling occurred for a 24-hour period during March 30-31, 2017, after employees were asked to leave the building to prevent further exposure potential to contaminants.

What are the health risks to employees that worked in the offices?

The TCE and PCE levels observed in these buildings are orders of magnitude lower than studies where measurable increases of cancer have been seen. However, the Health Department is concerned about the presence of PCE and TCE for two reasons:

- PCE and TCE are classified as carcinogens. Exposure to PCE and TCE can increase risk for kidney, bladder and blood cancers.
- TCE has also been associated with cardiac malformations in a developing fetus.

Chloroform causes cancer in animals only when the dose is very high, at levels well above what was observed in the St. Johnsbury AHS Offices.

How long do the chemicals stay in the body?

Once a person is removed from the exposure, these chemicals leave the body in a day or two. That's why the State took immediate action to move employees out of the building.

When will employees be returning to work?

Employees that provide essential state administration or family services are deemed "mission critical" and continue to work from an alternative location to ensure continuity of operations. The State is moving quickly to secure a longer-term alternative location that can accommodate all relocated employees that is also accessible to community members in order to resume normal operations.

How long will it take for the building's contamination to be addressed?

The Department of Environmental Conservation has provided the property owner with a series of milestones related to the development and implementation of a remediation plan. These milestones include deadlines for additional sampling as well as a selection of mitigation measures. The outlined procedures could take several months or occur on an accelerated timeline taking several weeks.

The Department of Buildings and General Services, which manages the state office lease for the buildings, will work closely with the Department of Environmental Conservation to evaluate options for potentially resuming operations in the buildings.

Who is conducting the additional testing?

Additional site testing will be conducted by the property owner's environmental consultant.

Who will pay for the air quality remediation?

The property owner is currently incurring costs of remediation.