

## FAQ: Testing of State Offices in St. Johnsbury

### Why was sampling conducted?

- The current owner of the building has been considering selling the property.
- The owner hired an environmental consultant to conduct a site investigation, which is a typical practice before selling a commercial property.
- The environmental consultant issued results on March 30 to the property owner showing the presence of three potentially harmful chemicals below the foundation of the building.
- The property owner notified state officials about the results.

### What are the contaminants that were found below the office buildings?

Tetrachloroethene, trichloroethene and chloroform and other chemicals were detected in soil gas below the buildings in St. Johnsbury.

**Tetrachloroethene** (also known as tetrachloroethylene, perchloroethylene, perchloroethene, or PCE): “PCE” is a manmade chemical typically associated with dry cleaning of fabrics. It is also used for degreasing metal parts and for manufacturing other chemicals. At room temperature, PCE is a nonflammable, colorless liquid. It readily evaporates into air, and has a sweet odor.

**Trichloroethene** (also known as TCE): “TCE” is a manmade chemical and solvent widely used as a degreasing agent. It was commonly used during dry cleaning operations, and is also a byproduct of PCE. Trichloroethylene is a colorless, volatile liquid. It evaporates quickly into the air. It is nonflammable and has a sweet odor.

**Chloroform** (also known as trichloromethane or methyltrichloride): Most of the chloroform found in the environment comes from industry. Chloroform is found in wastewater from sewage treatment plants and drinking water to which chlorine has been added. Chlorine is added to most drinking water and many waste waters to destroy bacteria, and small amounts of chloroform are formed as an unwanted product during the process. Chloroform is a colorless liquid with a pleasant, non-irritating odor and a slightly sweet taste.

### What is the health risk of the chemicals?

- PCE, TCE and chloroform are classified as carcinogens.
- PCE, TCE and chloroform are known to cause cancer in humans. Health effects depend on how much a person was exposed to the chemical, and the length of time a person was exposed. Some studies in animals show that TCE can affect the developing fetus.
- Once a person is removed from the exposure, these chemicals leave the body in a day or so.
- Indoor air quality has not yet been sampled to determine what risk currently exists.

### How might I be exposed to PCE, TCE or Chloroform?

- People can be exposed through inhalation (air), or in water or food.
- Exposure can also occur through skin contact with other contaminated media (soil)

### Why wasn't air quality tested inside the building?

When an environmental consultant conducts a site investigation of property, he/she is concerned with what kinds of contaminants may be present in soils and groundwater underlying the property. If contaminants are found beneath the building above threshold levels that indicate a potential risk to indoor air quality, the property owner may proceed by testing indoor air quality to assess potential exposure.



**Why is the State conducting indoor air quality testing?**

The State is working to determine if the contaminants present beneath the office buildings are affecting the indoor air quality of working spaces, and potentially posing a health risk to state employees. Ensuring that employees have a safe space to work is paramount. Indoor air testing was conducted on Friday, March 31. Results are expected on Tuesday, April 4.

**Who is paying for the testing?**

The property owner of the building agreed to use his environmental consultant to expand testing services to include indoor air quality testing.

**What is the role of Department of Environmental Conservation (DEC) in site remediation efforts?**

The Sites Management Section (SMS) of DEC provides State oversight for the investigation and cleanup of properties where a release of a hazardous material has contaminated the environment, including soils, groundwater, surface water, and indoor air. Working with the property owner, DEC will review the results of an investigation and determine the appropriate remediation that is necessary to protect human health and the environment.

**If indoor air quality is found to be an issue, will the buildings be permanently closed?**

The DEC has successfully remediated dozens of sites across the state that are found to contain impacted soils, groundwater, and indoor air. PCE, TCE and chloroform are very well known contaminants that can be removed with several reliable cleanup approaches. Indoor air quality issues can be resolved usually within several weeks, depending on concentration levels inside the building.

**Will there be a need for continued air monitoring after the initial results are received?**

If indoor air quality is an issue, a remediation effort would take place to redirect soil gas contaminants previously entering the building into outdoor spaces. Once the installed technology is successfully diverting soil gases and indoor air quality is restored, there would not be a need for continual air monitoring.

**How do you mitigate indoor air impacts?**

Indoor air quality can be restituted by installing a sub-slab depressurization system. A series of pumps and pipes are installed in a building to pump volatile gases up above ground without moving through the indoor air of the building where people work or live. View the “Sub-Slab Handout” for a description and diagram of this remediation technology. The technology does not remove the source of contamination in the soils or groundwater beneath a building.

**How did these contaminants get into the environment? Is PCE a common contaminant?**

PCE and TCE are manmade chemicals typically associated with dry cleaning operations and other industrial processes. Chloroform can be a byproduct of PCE or of chlorine additions to drinking water or wastewater. The Department of Environmental Conservation has managed many sites where PCE and TCE are found in soil, soil vapor, groundwater, or indoor air.

**Are the alternative work locations for AHS employees safe spaces to work?**

The Department of Buildings and General Services is working with the Department of Environmental Conservation to evaluate risk and identify suitable spaces for alternative work locations. The DEC is not authorized to test site locations without property owner agreement or a confirmed chemical release. Public records listing hazardous waste sites and former dry cleaning business locations can be used to help generally identify risk.

**Where can I find more information about the health impacts of these contaminants?**

The Department of Health will be able to provide more specific information about potential health impacts when results are received from indoor air quality testing of the office buildings. Testing of indoor air quality will determine the level of risk to contaminant exposure.

Results are expected on Tuesday, April 4, 2017. Employees will be briefed on this date about the results.

To read general information about the potential health risks associated with the contaminants, see the suggested contaminant profiles below:

Public Health Information on PCE: <https://www.atsdr.cdc.gov/ToxProfiles/tp18-c1-b.pdf>

Public Health Information on TCE: <https://www.atsdr.cdc.gov/ToxProfiles/tp19-c1-b.pdf>

Public Health Information on Chloroform: <https://www.atsdr.cdc.gov/ToxProfiles/tp6-c1-b.pdf>