

Perfluorinated Compounds: Vermont Fire Academy



Services / Expertise

Environmental Assessment and Remediation
Groundwater Contamination
Environmental Sampling

Market

State Government

Project Location

Pittsford, Vermont

Date Completed

2016

Project Owners

Vermont Department of Environmental
Conservation (VT DEC); Vermont
Department of Buildings and General Services
(VT BGS)

Project ID#

2016-061; 2016-068

GOV. SHUMLIN PROVIDES NEW RESULTS ON STATEWIDE TESTING OF PERFLUOROCARBONS

Montpelier – Gov. Peter Shumlin provided an update today on perfluorocarbon testing results from water samples collected at three locations: Harbour Industries in Shelburne, the Vermont Air National Guard base in South Burlington, and the Pittsford Fire Academy. The three locations are part of a Statewide sampling plan to investigate sites where perfluorocarbons, like PFOA and PFOS, may have been used.

Private wells sampled near Harbour Industries in Shelburne tested clean for both chemicals. Results showed PFOA and PFOS to be present at the Vermont Air National Guard site, and in an underground storage tank at the Pittsford Fire Academy. Both sites have historically used firefighting foam in routine training exercises.

No drinking water supplies have been impacted by PFOA or PFOS contamination at any of the three sites. The limited wells located near these sites are either inactive or have been tested previously and were not found to contain perfluorocarbons.

PFOA and PFOS are likely carcinogens used in a variety of industrial processes to make non-stick and weather resistant surfaces. PFOS specifically is known to have been a component of a special class of firefighting foams called aqueous film forming foams.

*Press release issued by the Vermont
Governor as part of the State's high-profile,
State-wide response to PFC contamination
issues, including at the Fire Academy Site.*



Stone Environmental designed and built a temporary water treatment system at the Vermont Fire Academy.

STONE worked with VT DEC to sample drinking water supplies for perfluorinated chemicals (collectively known as PFAS) in the area of the Vermont Fire Academy, a facility operated by the Vermont Department of Public Safety. From the 1970s until 2011, the Fire Academy used aqueous film-forming foams during training exercises that contained PFAS, primarily perfluorooctanesulfonic acid (PFOS). Vermont recently issued a Groundwater Enforcement Standard of 20 parts per trillion (ppt) for PFOS and perfluorooctanoic acid (PFOA) in groundwater, representing one of the more stringent standards in the country for these emerging contaminants of concern. Before proceeding, Stone developed a State-approved PFC sampling plan and Standard Operating Procedure. Results of the sampling program indicated that private drinking water supplies were not contaminated with PFAS.

Next, under contract to the VT BGS, while continuing close coordination with VT DEC and other stakeholders, Stone collected samples of water and accumulated sludge from the Fire Academy's 78,000 gallon water recycling tank. Those results showed the presence of PFOS and PFOA at combined concentrations of 80 ppt in water and 220 parts per billion (ppb) in tank-bottom sludge. Working closely with several Vermont State agencies in a collaborative process, over two weeks Stone designed, built, and initiated operation of a cost-effective system to treat and discharge approximately 60,000 gallons of water stored in the water recycling tank using granular activated carbon.

Following water treatment Stone oversaw the cleaning of the water tank and associated drainage pipe network, and prepared a conceptual site model identifying potential PFAS source areas based on the latest science concerning these emerging contaminants. Unique challenges presented by the Site include a deep vadose zone (>40 feet) and the large potential release area.