



FACT SHEET: TCE Contamination

Nonantum Area of Newton, MA | October 18, 2017

Introduction

In 2014, the Massachusetts Department of Environmental Protection's (MassDEP's) Waste Site Cleanup program audited a report that had been previously submitted to the agency. The audit was prompted by updated scientific information about the risks at sites that are contaminated with the chemical trichloroethylene, or TCE, which was once a commonly used industrial solvent. MassDEP is particularly focused on sites with TCE in groundwater at concentrations and depths that could result in migration of TCE vapors into overlying buildings, which is called "vapor intrusion." The possible health effects from breathing TCE depends on the levels in indoor air, the length of exposure, and whether and when a person is actually exposed. TCE exposures may increase the risk of heart malformations in a developing fetus. Breathing TCE over a long period of time may affect the immune system, increase susceptibility to infections, and increase an individual's risk of cancers of the kidney, liver and non-Hodgkin's lymphoma.

MassDEP Investigations

The report that MassDEP audited concerned a property on West Street that was once a used auto parts operation. A study of environmental conditions at the property, conducted prior to its sale and redevelopment, revealed elevated concentrations of TCE in groundwater and petroleum in soil. A cleanup of the petroleum-contaminated soil was performed, but the report concluded that the TCE-contaminated groundwater was originating from an upgradient location.

Upon review of the report, MassDEP determined that the level of TCE in groundwater posed a threat of vapor intrusion into nearby homes. MassDEP then initiated a program of installing shallow wellpoints to test the groundwater for TCE, and seeking permission to test the indoor air of nearby homes. The primary goal of MassDEP's investigations was to delineate the extent of TCE in shallow groundwater that could cause vapor intrusion, and then test the overlying buildings in that delineated area. MassDEP's studies eventually resulted in the installation of 90 groundwater monitoring wells, and the testing of over 160 buildings (mostly residences). Of



Approximate study area

the 160 buildings tested, 11 were found to have levels of TCE that exceeded MassDEP's "Imminent Hazard" threshold. MassDEP installed radon-type abatement systems in 10 of these homes. A vapor mitigation system also was installed in the Mill Building located at 320 Nevada Street, where elevated levels of TCE were entering the building.

Potentially Responsible Parties:

While most of the 90 monitoring wells installed by MassDEP were installed to delineate the area that may be susceptible to vapor intrusion exposures, a number of monitoring wells were also installed to help identify the source(s) of the TCE contamination, which would help identify the parties that may be legally responsible for the contamination.

Monitoring wells installed near Pellegrini Park indicated that a source of TCE-contaminated groundwater was further north of the park. MassDEP then installed a row of monitoring wells along Watertown Street between the park and the Mill Building on 320 Nevada Street. Several of the monitoring wells placed in front of the building at 471 Watertown Street, south of the Mill Building, contained the highest concentrations of TCE measured to that point, at depths of 60-70 feet below ground surface. In light of that data, along with historical information about manufacturing operations at 320 Nevada Street which included the use of TCE, MassDEP concluded that

the property owner and the former operators of the manufacturing business at 320 Nevada Street were “potentially responsible parties” as defined in the Massachusetts law governing hazardous material releases to the environment (M. G. L. Chapter 21E). On September 13, 2016, MassDEP notified the property owner (One Nevada Realty LLC) and the company (Northrop Grumman Corporation) which acquired the former manufacturing business that MassDEP considered them to be “potentially responsible parties” (PRPs) for TCE contaminated groundwater at 320 Nevada Street and 459-471 Watertown Street.

In response to MassDEP’s notices, One Nevada Realty LLC and Northrop Grumman Corporation have been cooperatively conducting site testing of soil, groundwater, soil vapor, and indoor air and have installed a remedial system at the Mill Building on 320 Nevada Street. A Phase I Limited Site Investigation was completed and can be viewed on MassDEP’s on-line file viewer at <http://public.dep.state.ma.us/fileviewer/Rtn.aspx?rtn=3-0033794>. Additional groundwater monitoring wells were installed by One Nevada Realty and Northrop Grumman Corporation to further assess the location, depths, and degree of groundwater contamination downgradient of the properties at Watertown and Nevada Streets.



Next Steps

There are several upcoming activities associated with the TCE contamination in Nonantum:

- ❖ Newton City Councilor Alison Leary has submitted a petition to have the site at 320 Nevada Street become a Public Involvement Plan site. Being a Public Involvement Plan site means that a formal plan will be developed by the PRPs for the site which will outline how the public will be informed of site assessment and cleanup activities, and what their opportunities for commenting on the site plans will be. A meeting will be held later in the Fall of 2017 to present the draft Public Involvement Plan to the public.
- ❖ In response to concerns expressed by some of the attendees at the last public meeting on this case, the Massachusetts Department of Public Health (DPH) will review existing health data routinely collected by cancer and birth defects monitoring programs. DPH will evaluate the pattern of three cancer types and certain heart birth defects that could be associated with TCE exposure, and see if the pattern appears different from what would be expected based on the statewide experience. MassDEP and DPH will continue to work together and share information with the community. For more detail see DPH’s fact sheet, *Community Meeting Follow-up, Response to Community Concerns Related to Vapor Intrusion in the Nonantum Area of Newton*.
- ❖ One Nevada Realty LLC and Northrop Grumman Corporation will continue to assess the extent of contamination that is attributed to sources of contamination at the 320 Nevada Street site, in accordance with the regulatory framework of MassDEP’s Waste Site Cleanup program.

Key Contacts

MassDEP:

Irene Dale, Project Manager | 978-694-3397
Irene.dale@state.ma.us

Jack Miano, Section Chief | 978-694-3357
John.miano@state.ma.us

Steve Johnson, Deputy Director | 978-694-3350
Stephen.johnson@state.ma.us

MassDPH:

Jessica Burkhamer | 617-624-5757
Jessica.burkhamer@state.ma.us

Brenda Netreba | 617-624-5757
Brenda.netreba@state.ma.us

Jan Sullivan | 617-624-5757
Jan.sullivan@state.ma.us

City of Newton, Health & Human Services:

Linda Walsh, Deputy Commissioner
617-796-1431
lwalsh@newtonma.gov

Deborah Youngblood, Commissioner
617-796-1420
dyoungblood@newtonma.gov