



# Old Fort Municipal Water, Well #2A

## Health Consultation

### Background

United Merchants and Manufacturing Company (UMMC) operated the Old Fort Finishing site from 1947 to 1984. Old Fort Finishing was a textile manufacturing facility located near the Old Fort Elementary School. UMMC donated Well #2A to the town of Old Fort after the plant closed in 1984. The town of Old Fort was using five wells including Well #2A to provide drinking water to town residents.

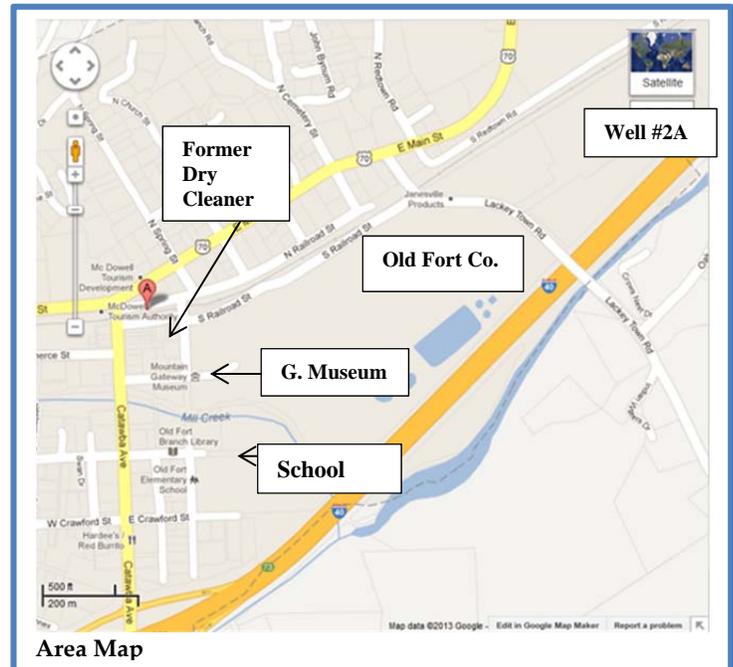
In December 1987 volatile organic compounds including trichloroethylene (TCE) were detected in municipal well #2A. The other four wells were not contaminated. Well #2A

was immediately disconnected from the municipal water system in January 1988. TCE contamination was also detected in three private drinking water wells near the UMMC facility in 1989. The residents were connected to municipal water. It was not until 2011 that new information became available about the harmful effects of TCE.

The Nichols Laundry and Dry Cleaning site also contaminated the groundwater with volatile organic compounds including TCE and tetrachloroethylene (PCE). The site stopped operations more than 10 years ago. The former dry cleaner was located about 700 feet northwest of Old Fort Elementary School. The building is now occupied by a laundromat and a flower/gift shop. The N.C. Department of Environment and Natural Resources (DENR) conducted extensive sampling of the groundwater and indoor air at the former dry cleaner and Gateway Museum in 2010 and 2012 to define the extent of the contamination. Indoor air was sampled because volatile organic compounds, including TCE, in the soil and groundwater can evaporate and enter the indoor air of buildings.

### Purpose of the Health Consultation

To evaluate if evaporation from the groundwater contamination or the contamination in Well #2A could harm the children and staff of the Old Fort Elementary School.



## How was the Health Consultation conducted?

The data evaluated came from the water samples of well #2A collected between 1987 and 1989, six private wells sampled in 1989, and air samples collected at the former dry cleaner location and the Gateway Museum between 2010 and 2012. The samples were collected by DENR. The data was evaluated using scientific information available since 2011 about the potential health effects of the chemical trichloroethylene (TCE).



Old Fort Finishing

## Conclusions

- The indoor air at the Old Fort Elementary School is not expected to cause harm to people.
- Old Fort Municipal water is tested periodically to ensure it meets state and federal standards. People are not expected to get sick from drinking the water from the town of Old Fort.
- People are not expected to get sick from breathing the air at the former dry cleaner location or the Gateway Museum. The chemical concentrations in the air samples are below levels known to cause harmful health effects.

Past Exposures: These conclusions reflect the worse-case scenario based on health protective risk calculations. The risk was calculated for people drinking the water only from the contaminated well at the highest concentration for four years. The actual risk maybe lower because people also drank from the other four wells that were not contaminated.

- The levels of TCE in one of five wells of the Old Fort Municipal Water System from 1984 to 1988 could have harmed people's health. This is based on scientific information on the health effects of TCE that was not available until 2011.
  - People who are now 25 years or older who lived in the town of Old Fort between 1984 and 1988 may have a higher risk of developing Non-Hodgkin's Lymphoma, kidney or liver cancer. They may have a higher risk of having developed thyroid, liver or kidney damage. Women who were pregnant during this time and drank the town's water may have had a higher risk of having children born with heart malformations.
- Water from the three private homes with TCE contamination could have harmed people's health. The risk was calculated for people drinking the water at the highest concentration for 33 years.
  - People who are 25 years or older who lived in one of these three homes before 1989 may have a higher risk of developing Non-Hodgkin's Lymphoma, kidney or liver cancer. They may have a higher risk of having developed thyroid, liver or kidney damage. Women who were pregnant during this time in those homes may have had a higher risk of having children born with heart malformations.

- We do not know when the contamination occurred, when the contaminants initially reached the wells, or how long the private wells were used.

## Recommendations

- People who lived in the three homes with contaminated well water before 1989, and people who are now 25 years or older and lived in the town of Old Fort between 1984 and 1988, should let their doctors know about their exposure to TCE in the water. Your doctor may be able to recommend things you can do to help protect your health.
- Some things people can do to reduce their risk of harmful effects from contact with TCE are: stop smoking, maintain appropriate body weight, exercise, drink only in moderation, consider the Hepatitis A and B vaccinations, always use appropriate ventilation and wear appropriate personal protective equipment when working with chemicals.
- DENR should continue to monitor the groundwater contamination to ensure that the contaminated groundwater is not moving to areas where people could be exposed to dangerous levels of TCE evaporation. They should also keep the workers at the former dry cleaner location and the Gateway Museum informed of monitoring and remediation activities.

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### **Additional Information**

Full reports are available under McDowell County at  
[http://epi.publichealth.nc.gov/oeo/hace/by\\_site.html#oldfort](http://epi.publichealth.nc.gov/oeo/hace/by_site.html#oldfort)



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