



**SIX-MILE RICHARDSON HIGHWAY
GROUNDWATER CONTAMINATION UPDATE**

August 1999

ADEC is offering to re-sample private groundwater wells in the Six-Mile Richardson Highway area. If you live between Old and New Richardson Highway and between Badger Road and Davison Street and south of the New Richardson Highway to the McCall property, we would like to hear from you!

Contamination levels in area groundwater are generally decreasing.

This well sampling offer is a "five year" check-up to supplement the ongoing area-wide long term groundwater monitoring.

Community workshop on investigation and cleanup activities tentatively scheduled for October 2, 1999 in Fairbanks.

Since 1994, the Alaska Department of Conservation (ADEC) has been actively investigating the nature and extent of the groundwater contamination in the Six-Mile area of Fairbanks. Petroleum, benzene and trichloroethylene (TCE) contamination have been found. Benzene may possibly cause cancer in humans. Private residences and commercial businesses in this area use the groundwater for drinking water. ADEC has identified spills on several properties that have contributed to the groundwater contamination and conducted soil cleanup at one site. ADEC is continuing to better identify remaining source areas and is developing a strategy to address the contamination.

Well Sampling Program

The Department is offering to sample the water of private residents who have drinking water wells on their property. ADEC is requesting interested residents that live within the plume area contact ADEC's contractor to arrange for sampling of their wells. The area of interest is located between the Old and New Richardson Highways and between Badger Road and Davison Street, and south of the New Richardson Highway to the McCall property. The work will be funded by ADEC with no cost to the residents. The water samples for all participants will be analyzed for volatile organic compounds (VOCs), including benzene and TCE. Depending upon findings from the VOC data, i.e., if within 70% of the drinking water maximum contaminant level (MCL), the water will also be analyzed for manganese and iron, since these metals may affect the efficiency of the treatment system.

If any sample taken from a well which is used for drinking water contains the VOCs of concern, i.e., trichloroethylene (TCE) or benzene, within 70% of the MCL, ADEC will work with the Fairbanks North Star Borough to provide those Six-Mile residents with an on-site method to treat their water. In 1995, ADEC performed a similar study and made treatment systems available through the Fairbanks North Star Borough.

The information collected from the private well sampling event will supplement data collected during annual region-wide groundwater monitoring that has occurred since 1995. A complete evaluation should be available by mid-November 1999.

ADEC is also asking residents who had water treatment systems installed in 1995 to contact ADEC's contractor. We can then check to see that the treatment system is properly working to reduce TCE and benzene levels.

Contact for Participating in the Drinking Water Survey

If you have a drinking water well on your private property and are interested in having the water sampled, please call Melody Debenham of ADEC's contractor, Shannon & Wilson (S&W) at (907) 479-0600. Melody will schedule a sampling time with you. Please call Melody by September 7, 1999. The sampling period will occur between September 7 and 17, 1999. If you have any questions, please contact either Mr. Doug Bauer (451-2192) or Mr. Rich Sundet (269-7578) of ADEC.

Community Workshop to Discuss Cleanup of TCE Plume

A report on the area-wide groundwater contamination is expected to be completed sometime between mid to late September 1999. This report will include summaries of yearly soil and groundwater investigations that have been on going since 1995, and will include cleanup options. These options, the costs and schedules will be presented to the public for discussion and public comment. ADEC will host a public workshop that is tentatively scheduled for October 2, 1999 to discuss possible cleanup and costs for the TCE source areas. The final meeting date and location will be advertised in the local media.

Background on the Six-Mile Contamination

During fall 1995, 95 residential supply wells were sampled in the area between the old and new Richardson Highways and between Badger Road and Davison Street. Six residential wells located south of the new Richardson Highway between Badger Road and Davison Street were also sampled.

Of the 95 wells, trichloroethylene (TCE) was detected in 51 wells with 16 of the wells above the 5 parts per billion (ppb) safe drinking water level or maximum contaminant level (MCL) for public drinking water. Of the 95 wells tested, benzene was detected in 17 wells. Four of the wells, located in the Six-Mile Village Subdivision, exceeded the 5-ppb MCL for benzene. Two of the four wells were also contaminated above MCL with TCE.

Upon reviewing the well data, in late 1995, ADEC responded by providing funds through the Fairbanks North Star Borough (FNSB) so residents could install on-site water treatment systems. FNSB awarded 17 grants (average of \$1,700) to individual residents who either upgraded existing or installed new household filter systems. In order to receive funding, the residence could not be co-located with a business, and the residential water had to contain at least 3.5 ppb of either TCE or benzene (i.e., 70% of the MCL).

The action was taken by ADEC to reduce the immediate exposure of unsafe levels of benzene and TCE in the drinking water to the residents. ADEC then developed a long-term strategy to investigate the feasibility of long-term safe water alternatives through the Village Safe Water Program, and to identify and cleanup the benzene and TCE source areas through the Contaminated Sites Remediation Program. Concurrent with these activities, a long-term groundwater-monitoring program was established. At the request of a local legislator, the federal Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the initial area-wide sampling results and concurred with ADEC's conclusions and strategies.

In early 1996, ADEC established a long-term groundwater-monitoring program using selected residential wells and a series of permanent groundwater monitoring wells. These wells have been sampled at least annually to monitor the extent and concentration levels within the regional contaminant plume. The results from the 1998-sampling event show the plume is stable in size with an overall decrease in concentration levels. However, there are a few wells where the concentration levels have remained stable or slightly increased. In 1997, the ATSDR reviewed the cumulative water data, and again concurred with ADEC's conclusions and strategies.

Cleanup of Source Areas

Since 1996, the benzene source area was identified and the cleanup of the source area was completed. Over 100 barrels of abandoned hazardous substances were identified and removed from a Six-Mile property. TCE source areas were identified on two different properties. Cleanup options to address the TCE contamination will be discussed in our upcoming September 1999 report and at the public workshop tentatively scheduled for October 2.

For More Information

If you would like to see files on the investigation and cleanup of the Six-Mile groundwater contamination, contact ADEC's Fairbanks Office at 907-451-2153 to arrange to review the files.

For more information contact Doug Bauer at 451-2192 or Bill Smyth 451-2177.