



**SIX-MILE RICHARDSON HIGHWAY
2007 RESIDENTIAL WELL TEST RESULTS
FAIRBANKS, ALASKA**

DECEMBER 2007

What's New?

Since 1995, the ground water quality in the Six Mile Richardson Highway area has been monitored by the Alaska Department of Environmental Conservation (ADEC). The monitoring consists of sampling a series of permanent monitoring wells and a selected number of private residential wells to track the location and concentration of an area-wide trichloroethene (TCE) ground water plume. Please refer to previous fact sheets that can be found at http://www.dec.state.ak.us/spar/csp/sites/6mile_area.htm for historical background information. The following is a summary of the fall 2007 residential well monitoring results.

Background

In 1995, TCE was discovered in 17 residential wells with concentrations exceeding 3.5 micrograms per liter ($\mu\text{g/L}$). This concentration is 70% of the public safe drinking water maximum contaminant level of 5 $\mu\text{g/L}$ for TCE and was established as an action level for the installation of household water treatment systems. The TCE concentrations have gradually decreased since 1995 as the result of natural attenuation. Annual testing has continued for those residential wells that have TCE concentrations above the action level. In addition, ADEC pays for the annual maintenance costs for the water treatment systems.

Fall 2007 Results

Nine residential wells were scheduled for sampling in the fall 2007. One resident declined sampling because their well was no longer connected and another residence no longer had a functional water well. The attached table presents the results for the seven residences that were sampled. Only two residential wells (1357 and 1369 Sloan) currently have TCE concentration at or slightly above the maximum contaminant level of 5 $\mu\text{g/L}$. These results are consistent with the 2006 sampling results, indicating the contamination is not increasing.

If you have any questions or need additional information, please contact the ADEC project manager, Ann Farris, at (907) 451-2104 or at Ann.Farris@alaska.gov.

TABLE 1
SUMMARY OF VOLATILE ORGANIC COMPOUNDS
IN RESIDENTIAL WELLS SAMPLED IN 2007
(all concentrations in µg/L)

SHANNON & WILSON, INC.

Address	Treatment System Present?	Maintenance Required?	Maintenance Performed?	Well Depth (feet)	Sample Date	Sample Number	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	trans-1,2-Dichloroethene (tDCE)	1,1-Dichloroethane
EPA Maximum Contaminant Level (MCL) →							5	70	100	3,650
1319 Smithson Street	No			ca. 25	8/9/07	11368-82006-004*	<0.500	<0.500	<0.500	<0.500
					11/2/07	11368-110207-001†	2.27	<0.500	<0.500	0.600
1378 Smithson Street	No			unknown	8/10/07	11368-82006-009	3.13	0.890	0.760	<0.500
1410 Richardson Hwy.	Yes	Yes	No	60‡	8/9/07	11368-82006-001	4.14	0.540	<0.500	<0.500
				63§	8/9/07	11368-82006-002	0.990	<0.500	<0.500	0.730
1430 Richardson Hwy.	Yes	Yes	Yes	60	8/9/07	11368-82006-003	4.36	<0.500	<0.500	<0.500
1357 Sloan Street	Yes	Yes	Yes	unknown	8/9/07	11368-82006-005	5.16	0.640	<0.500	<0.500
1366 Sloan Street	Yes	Yes	No	40	8/10/07	11368-82006-006	2.82	1.52	2.39	0.730
1369 Sloan Street	Yes	Yes	No	unknown	8/10/07	11368-82006-007*	<0.500	<0.500	<0.500	<0.500
						11368-82006-008 (dup)*	<0.500	<0.500	<0.500	<0.500
					9/24/07**	1368-092407-002	4.57	1.35	1.15	0.600
						1368-092407-003 (dup)	5.00	1.48	1.46	0.560
1345 Smithson Street	No			30	Not sampled. Owner declined sampling offer. Plumbing disconnected.					
1354 Sloan Street	Yes	Not sampled. Plumbing disconnected.								

Notes:

Samples were analyzed by EPA Method 524.2; only those compounds detected above the Practical Quantitation Limit (PQL) are listed.

Values in **Bold Type** exceed the EPA Maximum Contaminant Level (MCL) for that analyte.

<0.5 - Analyte not reported above given PQL.

(dup) - Duplicate of sample collected on same date

* This residential sample is not considered representative of groundwater conditions at this address. A second sample was collected later in 2007.

† The residential well at 1319 Smithson Street was re-sampled on November 2nd, as the August sample was suspected of being unrepresentative of groundwater conditions at that address.

‡ This is the previously existing well at 1410 Richardson Highway, which has been providing groundwater samples since 1995.

§ This is the newly installed well at 1410 Richardson Highway, sampled for the first time in 2007.

**The residential well at 1369 Sloan Street was re-sampled on September 24th, as the August samples were suspected of being unrepresentative of groundwater conditions at that address.