

Results of Groundwater Analyses at South Patrick Shores

Water samples were collected from 12 existing wells in South Patrick Shores on August 13-14, 1991. Ten shallow wells and two deep wells were tested. The approximate location of the wells sampled are shown on the attached map. The results do not show any evidence of contamination from dumping in either the shallow or the deep aquifer.

A summary of the results of the testing is presented in the attached table. Most of the wells contained inorganic chemicals that are commonly seen in groundwater near the coast. These chemicals make the water unsuitable for drinking, but do not present a health risk of any kind.

A few wells had trace amounts of chlorinated pesticides. Atrazine was found in three wells. Atrazine is a widely used household herbicide that was first sold commercially in 1958, after the majority of the houses in the subdivision were constructed. The highest concentration was about twice the safe level for lifetime exposure to atrazine in drinking water. There is, however, no health risk from using this water for irrigation or air conditioning. Two wells had heptachlor epoxide and two had dieldrin. These are insecticides that were previously used as termiticide, but are no longer in use. The presence of these chemicals is the result of the previous use of these compounds in and around houses. The levels present are below the safe level for lifetime exposure for drinking water. This means if someone drank this water for a lifetime, there would be no adverse effect from these chemicals.

In summary, the results do not show the presence of any chemical that is even remotely associated with Hodgkin's Disease. The chemicals present are from natural sources except for the chlorinated pesticides. Neither the inorganic compounds nor the chlorinated pesticides represent a health risk to any of the residents of South Patrick Shores.

Summary of Groundwater Analyses

Chemical	Number with chemical	Range of Concentrations
Arsenic	4	3.2-10.2 µg/L
Lead	1	16 µg/L
Nitrate	4	.11-.77 mg/L
Nitrite	3	0.086-0.094 mg/L
Chloride	12	530-1400 mg/L
Fluoride	12	0.29-0.93 mg/L
o-Phosphate	1	0.26 mg/L
Potassium	12	5.49-9.74 mg/L
Sodium	12	216-627 mg/L
Sulfate	12	64-190 mg/L
Total Dissolved Solids	12	1348-2834 mg/L
Total Alkali	12	140-210 mg/L
Barium	4	0.103-0.188 mg/L
Calcium	12	97.6-132 mg/L
Copper	1	0.201 mg/L
Iron	9	0.212-0.946 mg/L
Magnesium	12	51.5-96.7 mg/L
Manganese	8	0.010-0.071 mg/L
Atrazine	3	2.4-6.8 µg/L
Dieldrin	2	0.031-0.060 µg/L
Heptachlor epoxide	2	0.044-0.045 µg/L

