Toxic Trial

Expert says two companies polluted G & H wells

By MARK SULLIVAN

BOSTON — In a courtroom session that sometimes resembled a science fair, a Princeton professor showed jurors in the *Anderson vs. W. R. Grace* leukemia trial yesterday how chemical wastes could have traveled from two Woburn industrial sites to a pair of municipal wells.

Aided by diagrams and a homemade "experiment" featuring a fish tank, a gallon of water, sponges and a tall test tube filled with blue ink, Dr. George Pinder demonstrated how contaminants dumped at the Cryovac plant on Washington Street and at 2 Salem Street tannery would have flowed through the ground and eventually tainted the wells.

Pinder, the star witness for the eight East Woburn families who are the plaintiffs in the case, testified under questioning by the plaintiffs' chief attorney that, in his opinion, contaminants now found at the well field did indeed originate at the Cryovac and tannery sites.

The industrial sites are owned by two huge corporations -- the Cryovac plant by W. R. Grace & Co., the former Riley Tannery by Beatrice Foods.

Anderson vs. W. R. Grace involves a claim by the eight Woburn families that chemical solvents dumped at the two plants during the 1960's and '70's contaminated a pair of municipal wells, which were closed in 1979 after 15 years of use.

The contamination caused the leukemia deaths of five children and one adult and the illnesses of two other children, the families contend.

Pinder, a renowned hydrogeologist and chairman of the civil engineering department at Princeton, told plaintiffs' attorney Jan Schlichtmann he felt "some" of five toxic chemicals "presently in the well site originated at Beatrice..."

He pointed to the fact that groundwater gradients during a December 1985 pump test were "from Beatrice" to one of the wells, Well G.

"I believe contaminants at times of (the wells') pumping have moved from the Beatrice site to the well field site..." said

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● Pinder

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Pinder. It took "less than a year's time," he said, for the chemicals to flow from the tannery to the wells -- a distance of some 600 feet.

Pinder also testified he felt "contaminants at the Grace site reached the well field."

He said the chemicals reached the wells from the Cryovac plant — some 2,400 feet away — "approximately three years after being introduced to the subsurface."

Pinder, pointer in hand, genially explained his exhibits to the jury as if he were conducting a college lecture.

Once, when the scientist began to offer an unrequested opinion U. S. District Court Judge Walter Jay Skinner good-naturedly reminded him he was "not in the classroom (and to) please stick to the question."

Pinder used visual aids to show how the flow of contaminants through groundwater can be accurately charted.

One, a homemade "experiment" featuring a plastic container of water, a glass case, sponges and a tube of ink, demonstrated how "contamination" could be dispersed through "soil."

The ink "contaminant" and "rain" from the water container were dripped into the tank onto a slanted sponge, which was left sit for a time. Checked after the mid-day recess, the sponge was seen to have a curved blue stain running down from where the ink had dripped and across at the angle of slant.

Another exhibit, a plastic triangle fitted with hanging rods at its three points and mounted at an angle on a camera tripod, was used by Pinder to show how the direction of groundwater flow is calculated.

The rods hanging from the tilted triangular plane represented different water levels, the heights of which determine the "slope" at which water in the field between them will flow. Household cream poured by Pinder onto the triangle — at different places -- was seen to always flow in the direction defined by the three points.

Further demonstrations by Pinder are planned for today.