ILLINOIS POLLUTION CONTROL BOARD January 24, 1991

VILLAGE OF SENE	CA,)	
	Petitioner,)	PCB 90-194
	v.)	(Variance)
ILLINOIS ENVIRO)))	
	Respondent.))	

DISSENTING OPINION (by J.D. Dumelle):

The Village of Seneca has known since August 23, 1985 that its water supply exceeded the Federal and Illinois radium drinking water standard. Thus their delay in complying makes a self-imposed hardship.

Radium is <u>not</u> some benign metal which perhaps is (a) needed in the body and (b) has some threshold value beyond which illness occurs.

Radium is an <u>ionizing</u> metal. Ra-226 is an alpha radiation emitter with a half-life of 1,600 years. Ra-228 is a beta radiation emitter with a half-life of 5.7 years.

Ionizing radiation causes cancer. One need only read Marie Curie's story where the discoverer of radium in 1898 later died of cancer no doubt brought on by radiation from this newly discovered element.

Radium acts like calcium in the body and seeks out the bone structure. Once there it radiates the adjacent tissue. Bone cancer can result. Head and sinus cancers can also occur.

Which population group is most at risk? The Illinois Department of Nuclear Safety's report "Background Document on Radium in Drinking Water" filed August 25, 1986 in R85-14 tells us. It is babies and teen-agers! (See p. 5)

The very Federal and Illinois radium standard is much too loose. And Seneca exceeds that standard! At the standard, the cancer risk over a 70 year lifetime is 1-in-14,300. That is exactly 70 times greater than the usual 1-in-1,000,000 risk advocated by USEPA for carcinogens.

I would urge the people of Seneca <u>not</u> to give their water, even if the radium standard is reached, to babies or to teenagers. Those groups of children are in a rapid growth spurt and

incorporate the radium into their bone structure. And I would urge Seneca to complete the new well as soon as possible.

Jacob D. Dumelle, P.E. LCDR-CEC-USNR (Ret)

Bøard Member

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board hereby certify that the above Dissenting Opinion was filed on the ______, 1991.

Dorothy M. Gunn, Clerk

Illinois Pollution Control Board