By Arthur S. Flemming, Secretary of Health, Education, and Welfare, July 14, 1959

Control of Radioactive Wastes

AM HAPPY to report that the first Federal enforcement action to control contamination of interstate waterways by radioactive wastes has now reached a successful conclusion through voluntary agreement.

As a result, the Vanadium Corporation of America will take immediate steps to prevent radium from its uranium milling operations in Durango, Colo., from being discharged into the Animas River, which flows from Colorado into New Mexico.

Agreement was reached at the second session of a conference held under the auspices of the Public Health Service in Santa Fe, N. Mex., on June 24, 1959. The Surgeon General of the Public Health Service approved the agreement July 14, 1959, and will notify the water pollution control authorities of Colorado and New Mexico, who are responsible for enforcing it. The agreement provides that the Vanadium Corporation within 4 months will be employing measures to reduce the radium in its waste discharge to the minimum it is possible to achieve by known methods.

This first enforcement action involving radioactive pollutants in water is significant for several reasons:

1. It sets a precedent for maintaining high standards in the control of radioactive wastes and human radiation exposure.

Although by merely extracting solid particles of radium from the wastes discharged into the river, radioactivity would have been materially reduced, the agreement goes beyond this and includes removal of all radium that can be removed by known methods.

2. The value of the 1956 law authorizing the Public Health Service to undertake pollution

surveys of all interstate streams and to institute antipollution procedures has been dramatically demonstrated.

Approximately 30,000 persons in south-western Colorado and northwestern New Mexico were using Animas River water, which ranged from 40 percent to 160 percent above maximum permissible levels of radioactive content. This fact was established by an intensive survey of the river, begun by the Public Health Service in April 1958 and completed in April 1959.

Because the law permits the Public Health Service to conduct water pollution surveys and hold conferences on the abatement of interstate pollution, the situation was brought under control before the population of the area had ingested sufficient amounts of this radioactive material to cause detectable health damage.

The pollution abatement procedure under the 1956 law is this: A conference is called by the Surgeon General. If agreement is not reached at the conference, or if the agreement concluded is not fulfilled, a public hearing is called by the Secretary of Health, Education, and Welfare. If the hearing board so recommends, the Secretary of Health, Education, and Welfare is empowered to issue a cease and desist notice which could lead to court action by the Attorney General of the United States.

During 1960, the Public Health Service expects to begin studies of the radioactive content of three rivers in Wyoming: Bighorn, Sweetwater, and North Platte.

3. The disclosure of a hitherto unsuspected hazard of chemical pollution was an important byproduct of the Animas River survey.

When the Public Health Service assigned an aquatic biologist to analyze the amount of radioactivity being absorbed by fish in the river—a standard procedure in such surveys—the biologist found that the river contained few fish and very little other aquatic life. Subsequent study revealed that a number of toxic

chemicals which were also contained in waste discharged by the Vanadium Corporation had caused this destruction.

Consequently, the company, in addition to controlling the radium in its wastes, will also recover the toxic chemicals before they reach the river.

Fluoride Naturally Present in Water Supplies

Fluoride occurs naturally in water used by communities in 43 States, according to a Public Health Service report "Natural Fluoride Content of Communal Water Supplies."

Based on data compiled by the dental directors of all State health agencies, the report indicates that the water supplies of 1,903 cities and towns with a combined population of 7 million contain enough fluoride naturally to prevent 2 out of 3 dental cavities.

In Texas, 2,700,000 persons in 356 towns use naturally fluoridated water. In New Mexico, 465,000 people, or 68 percent of the total population, live in communities with such water supplies.

More than 450,000 people in 136 Illinois towns and 406,000 in 184 Iowa communities drink water with fluoride present in nature. At least 100,000 people in each of 10 States, California, Colorado, Florida, Idaho, Indiana, Kansas, Louisiana, Michigan, Ohio, and Wisconsin, live in towns served by naturally fluoridated water supplies.

Thirty-five percent of the 7 million persons using naturally fluoridated water live in towns and cities with populations of more than 50,000. Thirty-eight percent live in towns of from 5,000 to 50,000 and 27 percent in communities of under 1,000.

The fluoride found naturally in water is identical in its effect to the fluoride used in controlled fluoridation, according to Dr. John W. Knutson, chief dental officer of the Public Health Service. The 1,800 cities now using controlled fluoridation adjust the fluoride content to that found in a great many of the naturally fluoridated water supplies throughout the country, or from 0.7 to 1.2 parts of fluoride per million parts of water. The 35 million people living in these 1,800 communities plus the 7 million using naturally fluoridated water means that 1 out of every 3 people using central water supplies now drinks water that has been fluoridated by nature or by the community.