PUBLIC HEALTH

Radiation Studies Begun

By July, samples of all the nation's milk will be tested for radiation contamination, laboratories will aid in detecting increase in radioactivity of foods and a publication of data is due.

HOW MUCH radiation is in the food we eat and the water we drink is just one of the questions being answered in research now under way, Secretary of Health, Education and Welfare Arthur S. Flemming has reported.

For example, instead of only the present 12 milk sampling stations, 60 are expected to be in operation soon. By July 1, Secretary Flemming indicated, we should have samples of the milk from every milk shed in the nation. This means a much clearer picture of the possible health hazard in radioactive contaminated milk should be available.

The Public Health Service is opening two new radiation laboratories in Las Vegas, Nev., and Montgomery, Ala., with a third one for special research on X-ray exposures scheduled for completion by late summer in Rockville, Md.

Field laboratories are being equipped for identification of specific radioisotopes. The Food and Drug Administration is thus expected to be able to expand its program of monitoring foods to detect and evaluate any increase in radioactivity content of foods due to fallout. The FDA is also to get a radiological unit which will provide for research in measurement techniques and methods of decontamination of foods, drugs and cosmetics. Key FDA personnel will be trained in instrumentation and radiochemistry, and in the use of radioactivity measuring equipment.

Another step in bringing radiation information to the public was announced by Secretary Flemming. On March 1 the first of a monthly publication containing radiation data will appear. It will include information from state as well as Federal Government agencies and departments.

More measurements of total beta radioactivity—which includes strontium-90 radioactivity—in fruits and vegetables have been made, Secretary Flemming said. While all measurements are within the limits set by the National Committee on Radiation Protection and Measurements as permissible for lifetime exposure, wheat samples from Colorado, Virginia and New York showed relatively high strontium-90 contents of 60, 59 and 52 micromicrocuries per kilogram respectively. More measurements of the radioactivity in foods, especially in the so-called "tonnage items," are to be made. These include eggs, lettuce, rice, tomatoes and the fish haddock.

It was pointed out that washing spinach reduced its total beta radioactivity content by an average of about 60%. However, Food and Drug Administration researchers pointed out that there are presently no standards by which to evaluate total beta radioactivity without knowledge of the individual radioactive isotopes present. It would be possible, for example, for the strontium-90 content of the spinach remain unaffected by the washing process. So far, it seems that there is no need to analyze most of the fruits and vegetables for strontium-90 since the total beta radioactivity is not high enough.

A "comprehensive water pollution clean-up" is expected as a result of a seven-state conference in Phoenix, Ariz. Secretary Flemming said it concerned all interstate aspects of pollution problems in the Colorado River and its tributaries, including radioactive contamination from uranium milling operations.

The highly successful program to rid the Animas River, one of the tributaries of the Colorado, of pollution resulting from uranium milling operations at Durango, Colo., provided an important impetus for the new project. Secretary Flemming said. Pollution of the Animas was reduced by about 90% in a period of four months as a result of actions begun under the enforcement provisions of the Water Pollution Control Act. However, it was pointed out, radioactive contamination of the water downstream from the milling operations was reduced by only about 50%.

An immediate objective of the conference is to assemble and analyze all available information regarding pollution and the present and future water requirements in the area.

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SHOCK TUNNEL—Used for testing aircraft and missile models at air speeds ranging from six to 16 times the speed of sound, the tunnel is almost 110 feet long. Technician (right) is working on the test section where a model is mounted during testing in the tunnel, developed by Cornell Aeronautical Laboratory, Inc., Buffalo, N. Y.

ENGINEERING

Shock Tunnel Permits Missile Tests 14,000 MPH

MISSILE and aircraft models may be tested at air speeds up to 14,000 miles per hour in a new hypersonic shock tunnel now in operation.

Hypersonic speeds are those five times faster than sound or greater. During test runs in the new tunnel, a missile or airplane model can be subjected to airflow velocities ranging from six to 16 times the speed of sound.

Built by Cornell Aeronautical Laboratory, Inc., in Buffalo, N. Y., the tunnel's outstanding feature is its ability to maintain such hypersonic airflow at constant speed for sufficient time to permit precise aerodynamic measurements of model performance.

A hypersonic shock tunnel basically consists of a shock tube connected with a nozzle and test section. During operation, the shock tube produces a supply of high-temperature, high-pressure air that is accelerated to hypersonic speeds when it flows through the nozzle into the test section. The model being studied is mounted in the test section.

The tunnel resembles an extremely long cannon, about equal to one-third the length of a football field. Its shock tube measures 90 feet in length and is about one foot in diameter. The nozzle and test section extend some 20 feet beyond the shock tube.

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