

An attempt is being made to produce protein feed supplements by growing micro-organisms on waste sulphite liquor or molasses media. Also, recent work has shown that vital gluten may be prepared from some low-grade wheat flours.

Administration.—The administration of the foregoing laboratories has now been organized as a Division of Administration and Awards, which exists only to serve the scientist. The five service units of this Division are: Awards and Committee Services (Awards, Committees, Publications, Research Journals); Administrative Services (General Services, Purchasing, Personnel); Information Services (Technical Information Service, Library, Public Relations Branch, and Liaison Offices in Ottawa, Washington, U.S.A., and London, England); Plant Engineering Services; and Legal and Patent Services. The latter Division works closely with Canadian Patents and Development Limited (see p. 88). An expert on economic research acts as special assistant to the Assistant Director, Information Services.

Section 2.—Research in the Atomic Field*

Atomic Energy of Canada Limited (AECL), a government-owned Crown company, operates Canada's main atomic energy centre near the town of Chalk River, Ont., 130 miles west-northwest of Ottawa. The company has a nine-man Board of Directors that includes representatives of private industry, public and private power companies, and the universities, and is engaged in four main activities: (1) the development of technology for economic atomic power; (2) fundamental scientific research in the atomic energy field; (3) operation of nuclear reactors and separation of nuclear fuels (plutonium and uranium-233); and (4) production of radioactive isotopes and associated equipment, such as Cobalt-60 Beam Therapy Units for the treatment of cancer.

The company is collaborating with the Canadian General Electric Company Limited and The Hydro-Electric Power Commission of Ontario (HEPC) in the building of an experimental atomic power station, to be known as NPD (Nuclear Power Demonstration), near Des Joachims, 12 miles up the Ottawa River from the Chalk River plant. The decision to build NPD followed a power reactor feasibility study, started late in 1953 and carried out by engineers of AECL, HEPC, the Montreal Engineering Company Limited, the Shawinigan Water Power Company, the British Columbia Electric Company Limited, and the Brazilian Traction, Light and Power Company Limited. The power reactor is expected to generate 20,000 kw. of electricity. The Nuclear Power Branch at Chalk River, the staff of which was recruited from several power-producing commissions and companies, has been carrying out preliminary design studies for a large atomic power station with an output of 200,000 kw. of electricity.

To ensure that the various publicly and privately owned utilities are kept fully informed of the progress being made, the Government set up in 1954 an Advisory Committee on Atomic Power Development on which the various power producers throughout the country are represented. The committee, which meets periodically at Chalk River, studies the research results obtained at that centre, receives complete information on the NPD station, and assists in evaluating the economic importance of atomic power in various regions of the country.

In 1955 an "industrial assistance office" was set up at Chalk River to create as wide as possible an interest on the part of private companies in the possible applications of atomic energy in general and of atomic power in particular.

Development of the Atomic Energy Program.—The program had its beginning in 1942 when it was decided to set up a Canadian-United Kingdom project in Canada, under the administrative control of the National Research Council of Canada. British, French and other European scientists doing nuclear research moved to North America early in World War II to work on an atomic weapon—the possibility of which became evident when O. Hahn and S. Strassman in Berlin, Germany, announced the first recognition of nuclear fission in 1939.

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