

recognized by the award of the Ryan trophy for each of the years 1955, 1956 and 1957. The company's Port Radium operation was also awarded this trophy on several occasions.

27. The Beaverlodge operation requires 14,000 h.p. to operate the mine, mill and plant. Part of this is supplied over a 30-mile transmission line from the Wellington lake 4800 kilowatt hydro plant and the balance from a 9000 kilowatt Cooper-Bessemer diesel electric installation at the mine. The average cost of power has been reduced from 17 mills per kilowatt hour in 1953 to 11 mills in 1960. A further marked saving will be made late this year when a second hydro-electric plant is completed and replaces the more expensive diesel power.

28. The Beaverlodge Operation has been and continues to be the main contributing source of revenue for the 2,000 inhabitants of Uranium City. The company has an investment of \$993,615 in municipal bonds issued to finance schools, a hospital and other services in the municipality of Uranium City, and it pays approximately \$240,000 per year in municipal taxes. The company also sponsors a program of housing loans, and about 140 employees have taken advantage of this program to build or purchase homes in the town.

Refining

29. The refining of uranium began at Port Hope in 1942 and has continued throughout the war and post-war years. The original product of the refinery was uranium black oxide with a purity of 96%. This product required further purification before it could be converted to uranium metal, the form in which uranium is used as a fuel for reactors. As the result of an intensive research and development program which began in 1950, a new refining process was developed. The product of this process is a metal grade oxide. The new circuit went into operation at the Port Hope refinery in June of 1955. It was designed for a capacity of 3,300 tons of output of metal grade oxide per annum. As a result of improvements in operating techniques, it has been possible to increase this output to 4,200 tons of metal grade oxide.

30. In 1956 it was considered advisable that the nuclear grade uranium metal required to support the reactor program of Atomic Energy of Canada Limited should be produced in Canada. It was therefore decided that operations should be extended to produce this material. Subsequent to extensive development and pilot plant testing, a green salt and a metal plant were constructed during 1957 and 1958. The first Canadian-produced uranium metal on a commercial scale was turned out in April 1958.

31. In addition, arrangements were made with Sorel Industries Limited and with AMF Atomics (Canada) Limited at Port Hope for forging, rolling and final fabricating of uranium metal ingots into finished fuel elements for use in the reactors at Chalk river.

32. When it became apparent that the Canadian uranium industry was unlikely to receive additional major contracts for uranium for delivery in the post-1963 period and that a stretch-out into this period of deliveries under existing contracts could be arranged, it became advisable to re-align the production schedule of the refinery to meet these new conditions. Accordingly, in September 1959 the operation was cut back from seven days to five days per week and the output scheduled at a constant 250 tons of U_2O_8 per month, i.e. 3,000 tons per year.

That is down from 4,200 tons for the previous year.