Arts received a second grant of $10,000 for the planning and acquisition of special exhibitions for 1960, the Museum's centenary year. The Norman Mackenzie Art Gallery of Regina College was awarded $3,000 for purchase awards for works by living Canadian painters, and for a slide collection.

Grants of $1,500 went to the Canadian Society of Painters in Water Colour, centred in Toronto, to hold its annual exhibition in Montreal, and to the Canadian Group of Painters (G.A. Smith, President, 5590 Keith Road, West Vancouver) to assist in its activities, and in the publication of a bilingual catalogue of its exhibitions.

The Council voted $3,300 to the McGill Chamber Music Society, directed by Alexander Brott, to help it give concerts in Mount Holyoke, Pittsburg and Ottawa in 1960. The Institut Nazareth of Montreal, a school for blind girls, received $1,320 to permit six students to study music at the Otter Lake Summer School.

Seven Canadian orchestras will receive a total of $18,000 from the Council for summer concerts; included are the Winnipeg Symphony, Halifax Symphony, Quebec Symphony, Ottawa Philharmonic, Calgary Philharmonic, Edmonton Symphony and Victoria Symphony, each to receive $2,500. The York Concert Society of Toronto received $3,000 for its season.

The Ottawa Little Theatre, which for 21 years has sponsored a national one-act playwriting competition, was awwrded $1,500 to print and distribute among Canadian amateur theatres 20 unpublished plays written by Canadians for this competition.

Aid to five Canadian periodicals amounting to $25,000 went to: The Phoenix, published for the Classical Association of Canada, $2,000; The Canadian Geographical Journal, published for the Royal Canadian Geographical Society, $15,000; Tamarack Review, published by the University of Toronto Press, $3,000; Ecrits du Canada Français, $3,000; Emourie, $2,000.

Visites Interprovinciales ( J.H. Biggar, Managing Director, 113 St. George St., Toronto) received $5,000 to extend its programme of exchange, whereby English and French Canadian children spend a few weeks in each other's homes to become familiar with another language and culture

The Canadian Library Association, Ottawa, received $4,000 for the "Canadian Index"; the Toronto Public Library was awarded $1,500 to aid in publication of the *Supplement* to *A Bibliography of Canadiana*. The Association Henri Capitant pour la Culture Juridique Française, Quebec, received $3,000 to aid in publication of papers of its Third Congress.

Friendly Relations with Overseas Students, Toronto, received $400 to send its National Chairman, A.J. Earp, to study facilities offered by the United Kingdom for the reception of students from abroad.

A survey of the financial and economic problems of ballet in Canada, made recently for the Council, produced valuable information not previously available. At this latest meeting, the Council decided to undertake a similar inquiry in the field of orchestral music.

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## NEW REACTOR AT CHALK RIVER

A low-power nuclear reactor, designed specifically for testing the fuel arrangement in large power reactors is to be built at Chalk River, it has been announced by Atomic Energy of Canada Limited, the Crown company that operates the atomic research centre.

Known as "ZED-2", a name that was chosen merely to distinguish it from a similar but smaller reactor at Chalk River called "ZEEP", the machine will be used primarily to investigate the physics of fuel for large atomic power stations such as the CANDU (Canadian Deuterium Uranium) plant for which a preliminary design is now being produced at A.E.C.-L.'s Nuclear Power Plant Division in Toronto.

Construction of ZED-2 and its building, and engineering of the reactor itself, is being done by Foster Wheeler Limited, St. Catharines, Ontario. The machine, which together with the research building will cost about $3 million, is expected to go into operation early next year. The ZED-2 reactor will have a power, or heat output, of only 100 watts, which is comparable to the power of the ZEEP (Zero Energy Experimental Pile) and PTR (Pool Test Reactor) reactors at Chalk River. The two other reactors in operation at Chalk River, NRX and NRU, have heat outputs of 40,000,000 and 200,000,000 watts respectively.

The new reactor will be moderated with heavy water and early experiments will use bundles of uranium oxide rods. The ZED-2 reactor will contain 35 tons of heavy water and a normal fuel loading will be 10 tons.

ZED-2 is similar in general design to the ZEEP reactor which went into operation at Chalk River in 1945, but will be larger to permit fuel rod experiments that cannot be performed in ZEEP. Another main feature of the new reactor will be apparatus for changing fuel rod arrangements by remote control. This will speed up experiments.

The core of ZED-2 is an aluminum tank 10 feet in diameter and 11 feet high containing the heavy water. Fuel rods are suspended in the tank and the power of the reactor is controlled by changing the height of the heavy water. Graphite two feet thick and weighing 70 tons surrounds the tank to reflect escaping neutrons back into the fuel region. Outside the graphite is high density concrete shielding 18 inches thick.

Basic design features for the plant were developed at Chalk River while Foster Wheeler Limited is doing the detailed design. The reactor will be operated by the Reactor Physics Branch of the Reactor Research and Development Division of Atomic Energy of Canada Limited.