

## Order Paper Questions

## QUESTIONS ON THE ORDER PAPER

(Questions answered orally are indicated by an asterisk.)

**Mr. John M. Reid (Parliamentary Secretary to President of the Privy Council):** Mr. Speaker, the following questions will be answered today: 2,177, 2,582, 2,605, 2,714, 2,715, 2,716, 2,717, 2,754, 2,902 and 2,908.

Mr. Speaker, if questions No. 2,393, 2,402 and 2,529 could be made orders for return, these returns would be tabled immediately.

I ask, Mr. Speaker, that the remaining questions be allowed to stand.

[Text]

## STUDY OF ENVIRONMENTAL IMPACT AT NUCLEAR PLANTS AND WASTE DISPOSAL SITES

Question No. 2,177—**Mr. Clark (Rocky Mountain):**

1. As of March 15, 1975, what study or studies has the government undertaken or participated in regarding the (a) immediate (b) long-term impact on the environment of the current methods of nuclear waste disposal at (i) the sites of the Pickering nuclear plant and the Bruce Depository (ii) the areas in the region of the sites which might potentially be affected?

2. What (a) is the exact description (b) is the projected cost (c) are the other participating parties involved in any such studies?

**Hon. Donald S. Macdonald (Minister of Energy, Mines and Resources):** 1. An environmental monitoring program was initiated by the Department of National Health and Welfare and the Ontario ministry of health prior to the initial operation of the Nuclear Power Demonstration Generating Station at Rolphton, Ontario in 1962. As additional nuclear-electric generating stations were constructed at Douglas Point, Pickering and more recently at Bruce county, Ontario, this program was extended to include such stations. Studies related indirectly to environmental impact at the Pickering nuclear plant and the Bruce waste management site include: radio ecology research into the behaviour of radionuclides in the aquatic environment and associated food chains by Atomic Energy of Canada Limited; pre-operational studies of dispersion in the atmosphere at the Douglas Point and Pickering nuclear plants by the Department of the Environment; current studies of the retention of radionuclides in typical glacial deposits funded by Atomic Energy of Canada Limited and the Atomic Energy Control Board; and current studies of radionuclide concentration in and receiving capacity of the Great Lakes by several federal and provincial government departments and agencies in connection with the Great Lakes Water Quality Agreement. Early studies at the Chalk River Nuclear Laboratories on the effects of low level radiation on fish contributed to the confidence in the radiation dose limits recommended by the International Commission on Radiological Protection. In addition to the environmental monitoring program conducted by federal and provincial authorities, Ontario Hydro carries out an environmental surveillance program that includes air, precipitation, milk, fish, surface water and ground water sampling and analysis. Irradiated fuel removed from the Pickering reactors is stored in a water-filled "spent fuel bay" within the station. Solid radioactive wastes including

[Mr. Malone.]

ion exchange resins, protective clothing worn by station personnel and other low-level wastes are packaged and shipped to the Bruce Waste Management Facility at Bruce county, Ontario. These wastes are stored retrievably in engineered structures and precautions are taken to prevent radiological releases to the environment.

2. (a) The environmental radioactivity programme of the Radiation Protection Bureau, Department of National Health and Welfare was initiated several years ago to provide assurance to the public that nuclear reactors are not affecting the environment through accidental releases and to evaluate the radiation exposure to the general population from small amounts of radioactivity released over a long period. This programme is in co-ordination with the provincial departments of health and Atomic Energy of Canada Limited. The following is a brief outline of the programme: (1) drinking water: samples of drinking water are obtained daily at selected intakes for communities drawing from water systems in the release path of effluents from the nuclear facilities. The samples are analyzed for gross alpha and beta as well as for  $^{89}\text{Sr}$ ,  $^{90}\text{Sr}$ , and  $^{137}\text{Cs}$ . (2) milk: to detect possible accidental releases, milk samples are collected twice weekly from farms in the vicinity of the reactor and analyzed for  $^{131}\text{I}$ . (3) biota: selected biota (fish, rabbit, muskrat) are collected in the vicinity of the nuclear plants and are analyzed for possible contamination from  $^{90}\text{Sr}$  in bone and  $^{137}\text{Cs}$  in flesh. (4) air water vapour: because tritium is the greatest concern in the radioeffluents of the CANDU reactor, the tritium concentration in the air water vapour is determined on a monthly basis at 24 stations around the three reactor sites. All of the data are reported semi-annually in the form of a departmental publication. (b) The annual operating cost of the environmental radio-activity surveillance program of the Department of National Health and Welfare is currently about \$210,000, of which one-third is related to the Pickering and Douglas Point reactor areas. (c) The other participating parties which assist in the collection and shipping of samples to Ottawa include: Ontario ministry of health, Ontario ministry of the environment, Ontario ministry of natural resources, Great Lakes Research Institute, municipal water works, and suitably located dairy farmers.

## TREASURY BOARD—COST OF LANGUAGE TRAINING

Question No. 2,582—**Mr. Herbert:**

1. What are the total costs included in the 1975-76 Estimates of the Treasury Board for language training?

2. How are such costs divided between (a) salaries of personnel receiving instruction (b) salaries of instructional staff (c) additional or supplementary services to be purchased from the Public Service Commission (d) other costs?

**Hon. Jean Chrétien (President of the Treasury Board):** In so far as Vote 1 is concerned, the answer is: 1. \$72,000 excluding the salary of personnel receiving instruction because each participating student carries the full duties of his position while taking part-time instruction.

2. (a) See 1. above; (b) Nil; (c) Nil; (d) \$72,000 for instructional services for in-house language training.