

TITLE: Review of Health Canada's Radioactivity Monitoring Networks

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ABSTRACT

Since 1958, Health Canada has maintained a network of 27 environmental monitoring stations across Canada as well as more concentrated monitoring around significant nuclear installations such as the nuclear power stations. Although the medium sampled varies depending on the particular site, airborne particulate concentrations, precipitation and external gamma dose rates are generally monitored. At some locations these have been augmented with surface water, drinking water or milk sampling.

In 1994, Health Canada issued a contract to BEAK Consultants to review the current network to determine if changes to the system were warranted in order to meet current and future needs. This paper will present the results of that review as well as the views of Health Canada on the implementation of the recommendations.

In order to formulate the objectives of the monitoring network, the views of 13 Canadian users were solicited either by personal interview or by questionnaire as the nature and content of the information that is useful to them. This was augmented by an analysis of major exposure pathways of Canadians in various regions of the country.

A general design of a revised Canadian network was formulated based on objectives and a review of radioactivity monitoring networks operated by North American, European and Asian countries. This information was based on a comprehensive questionnaire and selected interviews at various agencies. In the report, the program was delineated into two basic components: those that fall within the basic mandate of Health Canada and those that are service provisions to other agencies or constituents. The report also indicated options for the detailed design of the network components with an emphasis on remote automatic monitoring. Possibilities of collaboration with other North American agencies were suggested to improve effectiveness and eliminate unnecessary interagency duplications. Quality assurance requirements for the network were also addressed.