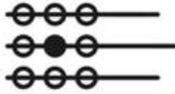


ZED-2



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ZED-2 Winter School and CNS Joint Speaker Session Dr. John Hilborn “Fully-Integrated Mo-99 Production from NRU and CANDU”

The Chalk River Branch of the Canadian Nuclear Society is pleased to offer a seminar entitled “Fully-Integrated Mo-99 Production from NRU and CANDU”:

Where: JL Gray – Bennett Room (Back Entrance)
When: Wednesday, December 7th
Refreshments/Reception at 6:30 pm, Talk at 7 pm
Price: Free, Open to the Public



Dr. Hilborn began his career in the nuclear industry in 1949, at the Eldorado uranium mine in the Northwest Territories. Joining AECL at Chalk River in 1954, he participated in the start-up of the NRU, NPD and WR-1 reactors and the Steam Generating Heavy Water reactor physics experiment at Harwell, England. In 1964, he demonstrated the feasibility of a self-powered neutron detector for reactor in-core monitoring, which was patented in 1967, and co-founded Reuter-Stokes Canada, Ltd, the manufacturer of these detectors. Dr. Hilborn’s most significant contribution to reactor research was the SLOWPOKE reactor concept which resulted in the SLOWPOKE Research Reactor, Demonstration Reactor (SDR), and the SLOWPOKE Energy System (SES-10).

Dr. Hilborn’s presentation will discuss a proposal for a new business model to transform the industry and establish a fully-integrated industrial radiopharmacy at CNL’s high-security site at Chalk River, in partnership with a similar fully-integrated industrial radiopharmacy at Lucas Heights, Australia. Assuming 2/3 global market share of Mo-99/Tc-99m generators and Tc-99m unit doses, this venture would earn combined annual revenue of ~ \$840 million by 2021. Full-integration requires a new business model incorporating two major initiatives:

1. *Create a consortium, consisting of: AECL/CNL, Australian Nuclear Science & Technology Organization (ANSTO), Ontario Power Generation (OPG), and Cardinal Health Canada Inc.*
2. *Provide duplicate facilities for Mo-99/Yc-99m target irradiation, chemical processing and waste management facilities at two high-security reactor sites: Chalk River (NRU), and Lucas Heights, Australia (Opal).*

This proposal is the basis of a new business model, whereby CNL would lead the consortium with the head office at Chalk River. In many respects the consortium would be similar to the 1960 partnership linking AECL, Canadian General Electric and Ontario Hydro which resulted in the Nuclear Demonstration Reactor (NPD), a highly successful prototype for all of the subsequent CANDU power reactors. Cardinal Health is a large international health products company, with 112 in-hospital radiopharmacies in the USA , 9 in Canada, and total assets of \$34 billion. The NRU reactor at Chalk River and the Opal reactor in Australia would irradiate Low-Enriched Uranium (LEU) targets for on-site chemical extraction of Mo-99, and manufacture Mo-99/Tc-99m generators for weekly distribution to Cardinal radiopharmacies in North America and world-wide.

A CNS membership is not required to attend this seminar; all are welcome. For more information, please contact Aidan Leach (613-584-3311 x44599 or 613-633-1158).