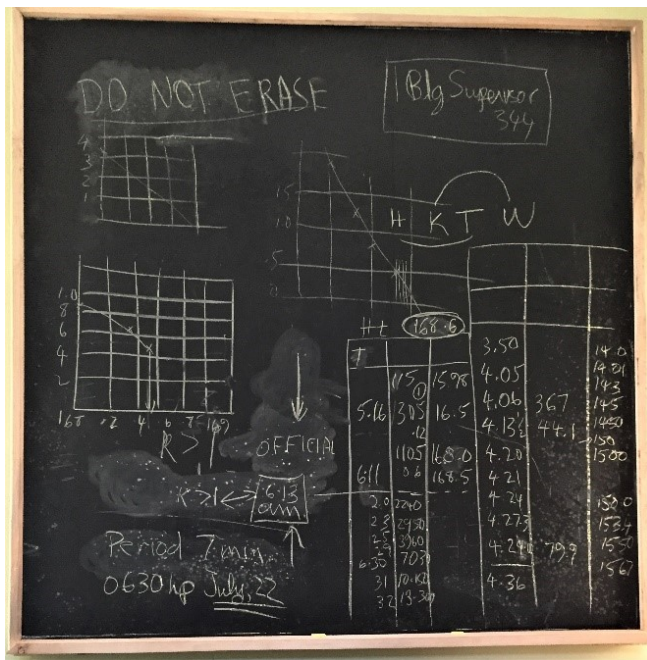


April 2022

Deep River, ON

Society Highlights NRU and NRX

This year, 2022, marks the 75th anniversary of the start-up of the NRX reactor at Chalk River as well as the 65th anniversary of the start-up of the NRU reactor. The Society collection has been adjusted to feature these two long-time mainstays of the Chalk River research and isotope-production programs. The NRX exhibits feature a large model that occupied the lobby of NRX for many years. Sadly neglected for some time, this model has been restored for public viewing. In addition, a slate CRNL blackboard rescued years ago by Dave Lee from material destined for the landfill and stored in his workshop has been refurbished by Dave and Mike Milgram and now bears an accurate reproduction of the blackboard used by W.B. Lewis to record the start-up of NRX (27 July 1947).



Lewis, in constant communication with the NRX control room where W. B. Sargent, D.G. Hurst, B. Pontecorvo and several others were stationed, used the board to record and plot the approach

to criticality as the heavy water level was raised. What did the letters H, K, W and T signify? They represented G.W. Hatfield, D.A. Keys, K.F. Tupper and W.H. Watson, who were in the room playing bridge during the long wait between the changes in water level. (It would appear Keys and Watson formed one pair!) Unfortunately, no photographic record of the staff on that occasion is known to exist.

By contrast, an excellent photograph exists of the 30 staff present in the control room for the start-up of NRU on 3 November 1957. After some difficulty, all the personnel have been identified. (see nuclearheritage.com under Group Photos).

The CNL Decommissioning Group at Chalk River have donated a number of artifacts related to the NRU. These include a shortened version of the assembly used in the repair of the calandria leaks in 2009, one of the tools used with the assembly, an unused assembly used to measure creep of zirconium alloys under different temperature and neutron flux conditions, a replica of an NRU Moly-99 production rod and the (never-needed) red "Bat phone" stationed in the control room to inform the Emergency Operations Centre that an emergency at the reactor had occurred. All these units are now mounted in a display near the entrance to the Society holdings.



Uranium Glass

St Barnabas Anglican Church (Deep River) held a Silent Auction in 2021 September, and one item of interest was a set of pale yellow-green glass plates. SPCNHI President Morgan Brown's suspicions of "uranium glass" were corroborated by using one of the Society's (many) Geiger counters that showed the plates were radioactive. But the Society always goes the extra distance, so director Bruce Heinmiller (retired Health Physicist) was called in to provide a professional assessment.



More detailed measurements verified radiation emissions consistent with those from one of uranium's short-lived daughters (protactinium-234m).

Yes, the plates contained uranium, an additive to glass intentionally used soon after uranium was discovered in 1789; however, the use of uranium in glass dates back to 79 AD, because it gave a yellow tint. The uranium content usually ranged from trace amounts to 2% by weight, although some 20th Century pieces contained up to 25%; presumably this helped keep your food warm!

Our plates, dating to the 1930s, are known as "Vaseline glass" because of their colour. Perhaps you have some suspect pieces at home; you don't have to borrow our meters, because uranium glass will fluoresce under UV light. The Society successfully bid for the plates, to join our piece of Fiestaware crockery (uranium glaze). Perhaps we'll use them in our first Gala Dinner!

Video-taping of Interviews

Despite the complications caused by Covid-19 restrictions during the past winter, the Society has been able to continue with its efforts to record interviews with some of the pioneers of the nuclear industry. It is hoped that as many as 20 of these interviews can be completed and be made available for viewing by the Society membership.

Visiting the Society's Collection

Unfortunately, the limited budget of the Society cannot accommodate the hiring of a part-time curator. This, combined with the small number of available volunteers, precludes regular visiting hours and the artifacts can only be visited by appointment or during Open Houses. With the easing of Covid-19 restrictions, however, it is much easier to arrange for private or group tours by appointment. To make arrangements email the Society website at info@nuclearheritage.com or call the Artifacts Chair, Jim Ungrin at (613)584-3055. Alternatively, keep an eye out for signs announcing Open Houses, especially around long weekends when more visitors to Deep River are expected.

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