



Canadian Nuclear Society / Société Nucléaire Canadienne

Chalk River Branch, c/o Dr. Blair P. Bromley, AECL-Chalk River Laboratories, Chalk River, ON K0J 1J0

<http://www.cns-snc.ca/branches/ChalkRiver/> e-mail: webmaster@cns-snc.ca

*“Supporting nuclear science and technology for over 25 years”
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Institutional Failure and Nuclear Safety

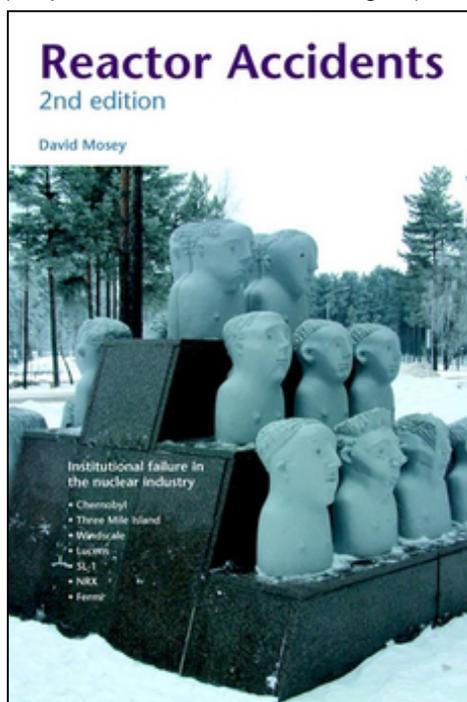
The Chalk River Branch of the Canadian Nuclear Society is pleased to welcome David Mosey (retired, Ontario Power Generation), who will speak on “Institutional Failure and Nuclear Safety”.

Institutional failure - that is, human error remote from the human-machine interface - is a major contributor to high-consequence accidents in all technologies. In the two most recent major nuclear accidents (Three Mile Island in 1979 and Chernobyl in 1986), equipment failure (as distinct from equipment limitations) played an inconsequential role. Operator actions were the key initiating events in the destruction of both reactors, but those actions were themselves results not causes. They were results of human errors in the organisations charged with the design, construction, operation and regulation of nuclear power plants. This kind of failure is identifiable as a causative factor in all major nuclear accidents so far, as well as in such diverse technologies as aerospace (Challenger), sea transport (Herald of Free Enterprise) railway transport (Clapham Junction and Paddington) and petrochemical (Flixborough, Piper Alpha).

Institutional failure should not be confused with the concept of safety culture. In an organisation with a healthy safety culture, institutional failure is less likely to occur, and is more likely to be detected and corrected when it does occur. However, serious institutional failures - human errors at senior levels in the organisation - can corrupt a previously healthy safety culture, and do so very quickly.

The important questions for the safety professional are: Given that in each of the accidents reviewed, "human errors" were made by management, and that these errors served to set the stage for the accident that was to follow, (1) how can we reduce the probability of such errors in the future? and, (2) how can we detect, correct and/or moderate the influence of those errors which are made?

David Mosey was born and educated in England. He was employed for thirty years in the Canadian nuclear industry, including eighteen years in the variously named nuclear safety functions at Ontario Hydro (later Ontario Hydro, Nuclear, and later still, OPG). His principal areas of interest were, and remain, high consequence accidents (both nuclear and non-nuclear) and the influence of organizational and managerial factors on safety. David Mosey is the author of *Reactor Accidents: Institutional Failure in the Nuclear Industry*, recently released as a 2nd Edition by Nuclear Engineering International.



David Mosey

7:30 PM

Thursday, November 23, 2006

Bennett / Mackenzie Room, J.L. Gray Centre
(Entry via rear security entrance)

Refreshments will be served – ALL ARE WELCOME

Further information: Blair Bromley at 584-8811 Ext. 3676, or 613-584-1518