

**EXTRABUDGETARY PROGRAMME
ON
SAFETY ASPECTS
OF LONG TERM OPERATION
OF WATER MODERATED REACTORS**

**MINUTES OF THE PROGRAMME'S THIRD
WORKING GROUP 1 MEETING**

16-20 May 2005

INTERNATIONAL ATOMIC ENERGY AGENCY

1. INTRODUCTION

The number of Member States giving high priority to extending the operation of nuclear power plants beyond their initial license is increasing. Decisions on long term operation (LTO) involve the consideration of a number of factors. While many of these decisions concern economic viability, all are grounded in the premise of maintaining plant safety. The IAEA recognized this new industry initiative; therefore, in the 1990's, it developed comprehensive generic guidance on how to manage the safety aspects of physical ageing. It was recognized, however, that internationally agreed-upon, comprehensive guidance was needed to assist regulators and operators in dealing with the unique challenges associated with the LTO issue.

In response, the IAEA initiated this Extrabudgetary Programme (Programme) on Safety aspects of long term operation of water moderated reactors (original title was Safety aspects of long term operation of pressurized water reactors). The Programme's objective is to establish recommendations on the scope and content of activities to ensure safe long term operation of water moderated reactors. The Programme should assist regulators and operators of water moderated reactors, and, in particular WWERs, in ensuring that the required safety level of their plants is maintained during long term operation, should provide generic tools to support the identification of safety criteria and practices at the national level applicable to LTO, and should provide a forum in which MS can freely exchange information.

The Programme activities are guided by the Programme Steering Committee (SC), follow the overall SC Programme Workplan and SC Terms of Reference, [1], and are implemented in 4 Working Groups (WG). The WGs focus on:

- general LTO framework (WG 1);
- mechanical components and materials (WG 2);
- electrical components and I&C (WG 3);
- structures and structural components (WG 4).

Further detailed information on the Programme could be found at: http://www-ns.iaea.org/nusafe/s_projects/salto_int.htm .

The 3rd meeting of WG 1 was hosted by the US NRC at its headquarters office, Rockville (1st day) and at University System of Maryland, Shady Grove Centre (2nd and 3rd day).

The purpose of the 3rd meeting of WG 1 was to:

- discuss results of review performed by review sub groups,
- identify additional information needed
- agree on future steps to draft the WG 1 final report

In the frame of the meeting a visit to NPP North Anna was organised on 19 May 2005. The visit included a presentation of the Dominion utility experience with license renewal process and a short plant tour.

The Agenda of the meeting is provided in Appendix I, the list of participant is provided in Appendix II and the presentations made during meeting are provided in Appendix III.

2. MEETING SUMMARY

The meeting was opened by F. Gillespie (US NRC) the Programme Steering Committee chairman, who summarized the progress done and informed about the future actions aimed to finalize the Programme Final Report before the end of 2006. P-T Kuo (USNRC), the WG 1 leader, welcomed all participants and thanked them for the work which was done by WG 1.

R. Havel provided information on the results of the 3rd meeting of Steering Committee (SC) which was held 25-28 April 2005 in Vienna. The SC noted that the progress of the Programme is in principle in compliance with the planned schedule. Corrective actions need to be identified and implemented where required for a successful completion of the Programme during the remaining 19 months. The SC requested the WG leaders/secretaries to co-ordinate the final WG reports preparation to ensure consistency among the WGs, focus the contents on LTO and confirmed that CIRs will remain restricted. Where CIRs information needs to be completed, this has to be done at a specific request for a particular information, not as a general revision. The SC defined specific tasks for WG 1 as follows:

- include definition of LTO in the final WG 1 report after review by WG 2-4;
- include definition of scoping/screening process in the final WG 1 report based on proposal of WG 2-4;
- identify preconditions of LTO;
- identify attributes of an acceptable LTO programme.

The next SC meeting is planned to take place 23-27 January 2006. The final first draft of WGs final reports has to be available for SC review on 5 December 2005.

All WGs will meet for the third time during May 2005 and further progress of work is expected.

Mr. Kuo welcomed the new members of WG 1 for Czech Republic (Mr.Kadecka), Slovakia (Mr. Kupca) and Ukraine (Mr.Kostenko) and also two representatives of the Netherlands Mr. A.de Jong (EPZ) and Mr. L.van Wiel (KFD), which joined programme recently.

The main part of the meeting was devoted to the presentations of the four review subgroups formed during the 2nd meeting of WG 1. The task of subgroups has been to analyse the information submitted in CIRs, identify common elements, and differences among national approaches, to reconcile the differences and to propose an optimal approach to LTO.

Subgroup 1 (Russia, Ukraine)

- 2.5. Final Safety Analysis report (FSAR)
- 2.6. In-service inspection
- 5.0. Current programmes related to LTO

Subgroup 2 (Czech republic, Slovakia)

- 2.3. Equipment qualification (EQ)
- 2.4. Reality Assurance Practices
- 6.0. Available research results and operating experience directly related to LTO

Subgroup 3 (Bulgaria, Hungary)

- 2.2. Maintenance practices
- 2.7. Time limited analysis (TLAA)
- 4.0. Activities planned are taken for LTO

Subgroup 4 (Finland, Sweden)

- 1.0. Law and regulations relevant to LTO
- 2.1. General design areas and standards for structures and components
- 2.0. Past upgrading of design basis requirements performed, including PSR

The presentations were prepared in writing except of 2.6. (Ukraine), 1.0., 2.1, and 3.0 (Sweden). The WG leader and secretary requested the respective countries to deliver written reports by 15 June 2005.

In the framework of the meeting two additional presentations were made:

J. Dozier, A.Hull, The American NPP Licence Renewal Guidance Documents and Generic Ageing Lessons Learned (GALL).

The presentation stated that the update of the above documents was prepared on the basis of gained experience with the aim to be more efficient, user friendly and universally applicable.

A.de Jong, and L.van den Wiel made presentations on the Long-term operation of Borssele NPP. The presentation contained information on Borsele NPP, its modernisation programmes, performed PSR and preparations for potential long-term operation up to 60 years.

3. VISIT OF NORTH ANNA NPP

On 19 May the visit of NPP North Anna was organised. North Anna belongs to the utility Dominion, which operates also NPP Surry and Millstone. Dominion has rather extensive experience with licence renewal process, since in May 2001 dual applications for Surry and North Anna NPPs were submitted for NRC review. The renewed licenses were issued in March 2003 for 20 years for all units. In January 2004 dual LR applications for Millstone units 2 and 3 were submitted for NRC review.

The presentation made by W. Watson on Dominion License Renewal described the License renewal process from the utility point of view. The project started with feasibility study, development of project schedule, assurance of funding and staffing the project, conduct of scoping and screening, development of AM review reports, position papers, AM programmes and TLAAAs. The parts of stipulated documentation included an Environmental Report and a license renewal application, both of which were submitted to NRC for review and approval.

4. ACTION ITEMS

The following action items resulted from the meeting:

- 1) The review reports will be finalised by the review subgroups' leaders on the basis of the meeting discussions (only specific missing information will be requested on a case by case basis to complete the CIRs/review) by 15 June 2005
- 2) The first draft of WG 1 final report will be prepared by P-T Kuo and Z. Kriz on the basis of review subgroups' reports and distributed to the WG 1 for review by 30 September 2005.
- 3) Comments to the first draft of WG 1 report will be sent by all WG 1 members to the WG 1 leader and secretary by 31 October 2005
- 4) 4th meeting of the WG 1 will be organised in the Nuclear Research Institute Rez plc, Czech Republic 14-16 November 2005 and subsequently on 17-18 November the seminar for all SALTO participants will be held.