1st Topical Peer Review
Public meeting
3rd May 2018
Brussels

Ageing Management Programs - AMP

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Ageing

................. is a general process (like in other industrial segments and is not specific for the nuclear sector) during which physical characteristics of the Systems structures and components (SSCs) gradually deteriorate with time or use. It occurs due to physical degradation (by use) or chemical or biological processes (e.g. harsh environment)
Features of an effective AMP

1. Scope of the ageing management program (SSC subject to)
2. Preventive actions to minimize and control ageing effects (proactive approach)
3. Detection of ageing effects (e.g. in service inspection, maintenance of SSC)
4. Monitoring and trending of ageing effects (e.g. comparison against acceptance criteria)
5. Mitigating ageing effects (e.g. environmental control, better materials, weldings)
6. Acceptance criteria (based on design basis with margins)
7. Corrective actions (e.g. repair or replacement)
8. Operating experience feedback and feedback of research and development results (e.g. within users groups)
9. Quality management (e.g. administrative control - documentation)

To be implemented through the entire lifetime of the plant (i.e. design, construction, commissioning, operation, decommissioning)
Ageing Management Programs - AMP

WENRA safety RF for existing reactors issue I - Ageing

„The operating organization shall have an Ageing Management Program (AMP) to identify all ageing mechanisms relevant to structures, systems and components (SSCs) important to safety, determine their possible consequences, and determine necessary activities in order to maintain the operability and reliability of these SSC“
Ageing Management Programs - AMP

WENRA technical specification - Ageing

Operator’s ageing management programs shall provide for:

- assessment of structures systems and components (SSC)
- monitoring, testing, sampling and oversight of SSC
- preventive and remedial actions
- review and update of the AMP

The regulatory oversight shall provide for:

- an assessment of the AMP processes
- inspection activities to review the compliance with requirements
Expert country review of AMP

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<th>Role</th>
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<tr>
<td>Project Manager</td>
<td>Nuclear Regulatory Authority (SK)</td>
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<td>Coordinator</td>
<td>Autorité de Sûreté Nucléaire (FR)</td>
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<td>Rapporteurs</td>
<td>Federaal Agentschap voor Nucleaire Controle (BE)</td>
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Total of 628 questions related to AMP raised by experts or countries.
Expert country review of AMP - outcomes

Preliminary (crosscutting) findings (12) of expert review:

- legal and legislative framework
- review and update of AMP (PSR, LTO)
- organization of licensee’s internal oversight, knowledge management
- scoping of SSC subject to AM
- international cooperation (i.e. IAEA IGALL, users groups etc.)
- time limited ageing analyses - TLAA
- application of AMP for research reactors
- etc.
Country review sessions on AMP

National presentations should cover:

- national requirements for ageing management programs and their implementation
- findings from the national assessment
- responses to questions (comments) on the national report
Make an assessment in relation to:

- Present situation of plants across Europe (regulatory bases, review and update of the programs, licensee’s experiences and practices etc.)

- Assessment of ageing management programs at European level (consistency of approaches and with international safety standards (WENRA, IAEA),

- Conclusions and recommendations relative to ageing management programs (good practices, areas for improvement, common challenges)
Country Review sessions - outcomes

Identify Peer Review findings (generic and country specific) categorized in:

- good practices (outstanding)
- good performance (meets requirements)
- areas for improvement (generic)
- challenges (specific)
Ageing Management Programs

International peer review processes

- EU Topical Peer Review
- IAEA expert missions (part of SALTO, OSART)
- WANO services
- Convention on Nuclear Safety

Relevant international safety standards

- IAEA (SSR–2/1, SSR–2/2, NS-G-2.12, SRS 82 etc.)
- WENRA Reference levels
Thank you for your attention