Ageing Management and Long Term Operation
in Spanish NPP´s

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Ageing management means *engineering, operations and maintenance actions to control within acceptable limits the ageing degradation of structures, systems and components*.

Ageing management program require a technical understanding of ageing degradation mechanism, inspection and assessment techniques, prevention and mitigation measures and, as needed, guidance on repairs or replacements for each component.
AGEING MANAGEMENT and LTO in Spanish NPPs

Since mid-90s, Operating Permit conditions include requirements for Ageing Management Review plans (AMR), and annual report.

In 2009 CSN issued specific regulations (based on USNRC License Renewal and IAEA SSG-25) for developing:

- AMR during PLiM (Plant Life Management up to 40 years life-time), and
- AMR for PLEX (Plant Life Extension or LTO, PIEGE, in Spanish).

Periodic Safety Review (every 10 years), must include provisions for LTO:

- Criteria for Selection of SSC (same scope as 10CFR 54 license renewal, passive),
- Identification of degradation mechanisms and feedback of operating experience,
- Assessment of the maintenance practices, and
- Time Limited Ageing Analysis (TLAA) studies: To ensure the SSC maintain safety functions throughout LTO.

Active SSC controlled through Maintenance Rule CSN IS-15, and other NPP maintenance programs (ASME O&M, electrical and I&C surveillances, MOV and AOV, snubbers,...).

CSN assess and inspect routinely Spanish NPP AMRs (included in Basic Inspection Plan).