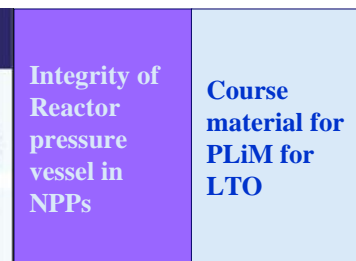
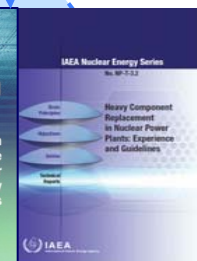
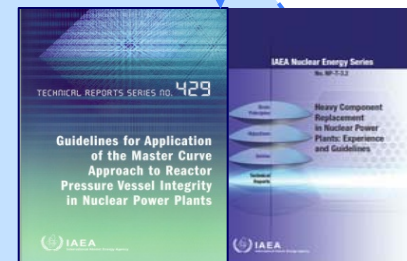
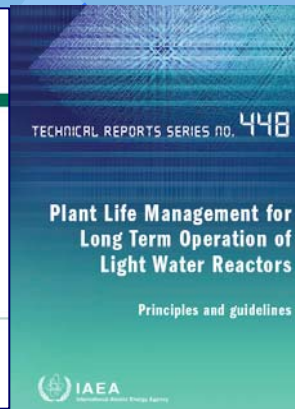
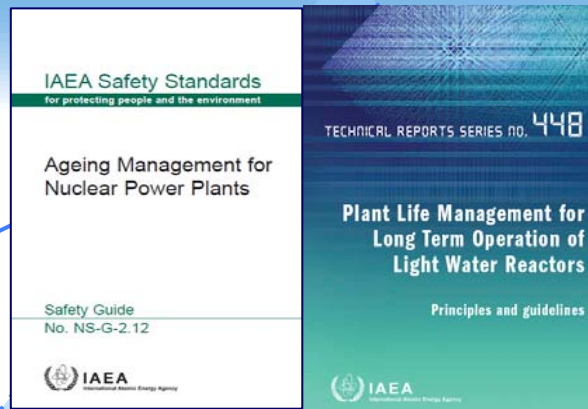


**International Atomic Energy Agency**

**IAEA Ageing Management  
Programme**

# PLiM for LTO document Structure



**Programmatic Guidelines (5)**

**Component Specific(13)**

**Review guideline**

**NSNI**

**RPV and PLiM (8)**

**Human Ageing Guideline (10)**

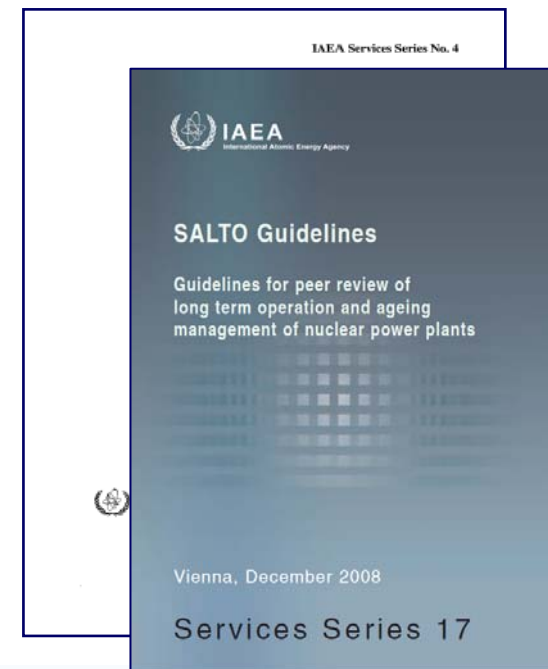
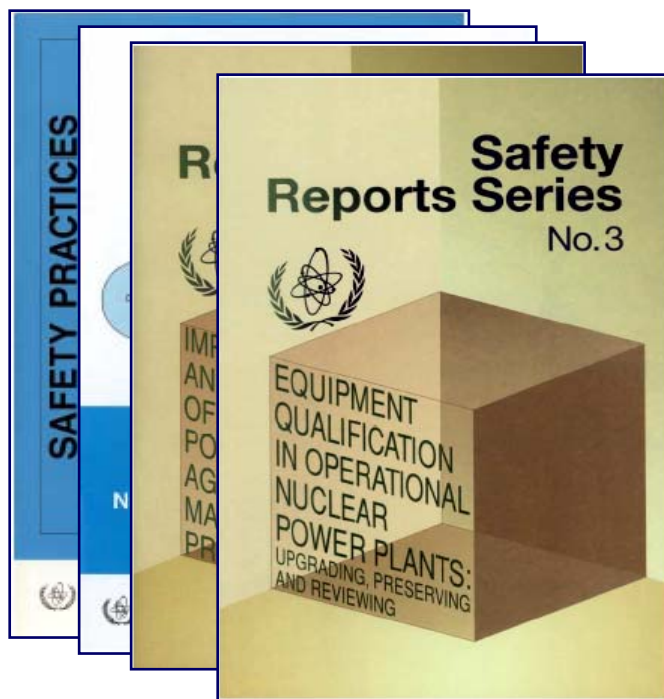
**Maintenance I&C (10)**

**NENP**



# Guidance Documents

- Programmatic guidelines
- Component specific guidelines
- SALTO/ Ageing management review guidelines



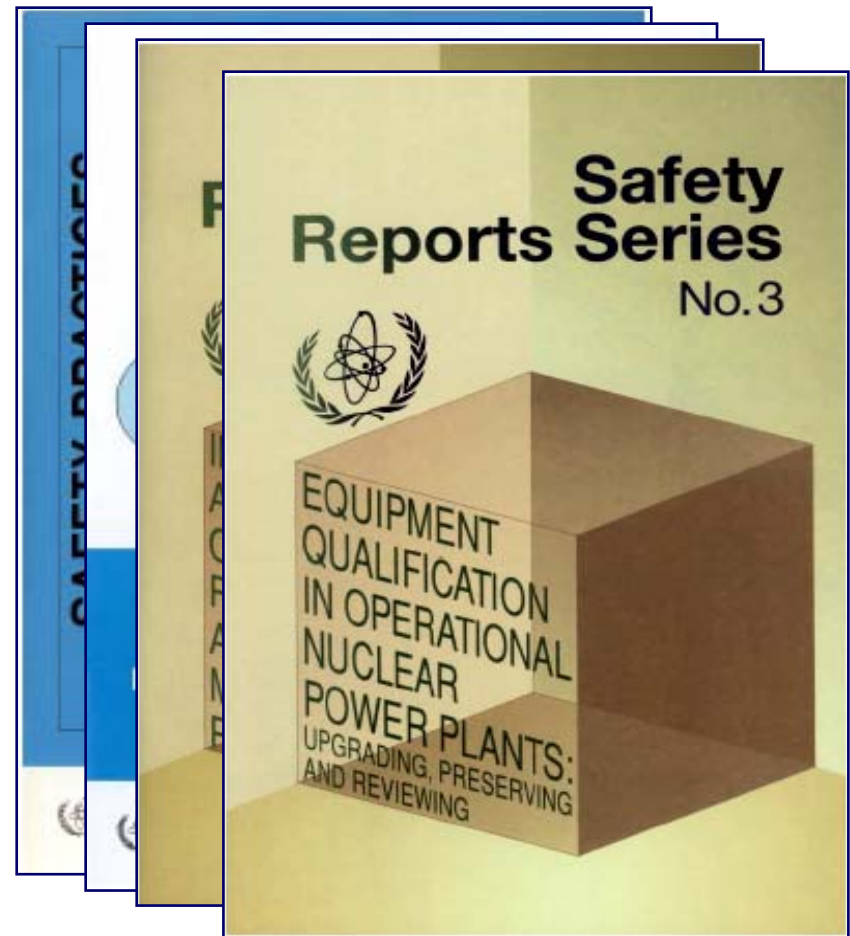
# Ageing Management Activities

- **Producing series of guidance documents**
- **Organizing review missions, workshops and meetings**
- **Establishing Knowledge-base on ageing and long term operation (so called SKALTO)**



# Programmatic Ageing Management Guidelines

- **Data Collection and Record Keeping for the Management of Nuclear Power Plant Ageing** (Safety Practice: Safety Series No.50-P-3)
- **Methodology for the Management of Ageing of Nuclear Power Plant Components Important to Safety** (Technical Report Series No.338)
- **Implementation and Review of Nuclear Power Plant Ageing Management Programmes** (Safety Report Series No.15)
- **Equipment Qualification in Operational Nuclear Power Plants** (Safety Report Series No.3)
- **Proactive Ageing Management** (being finalized)



# Component specific guidelines (2)

## “Assessment and Management of Ageing of Major NPP Components Important to Safety”

### Objectives:

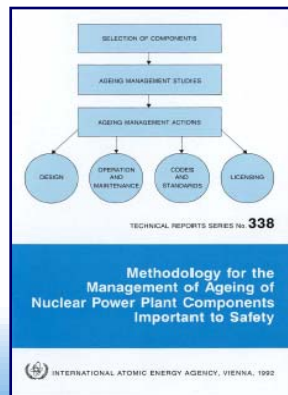
for each specific component

- To identify significant ageing mechanisms
- To document the current practices for the assessment and management of ageing

➔ **To assist Member States in establishing a systematic ageing management programme**

### Based on:

- Current experience and practices in Member States
- Methodology for the Management of Ageing of NPP Components Important to Safety, Technical Reports Series No. 388 (1992)



**Basic AM  
Methodology**

7/13/2009

6



**Component  
Specific  
AM  
Programmes**

International Atomic Energy Agency



# Component Specific Guidelines (1)

“Assessment and Management of Ageing of Major NPP Components Important to Safety”

- For specific NPP components important to safety.
- 13 TECDOCs have been published.



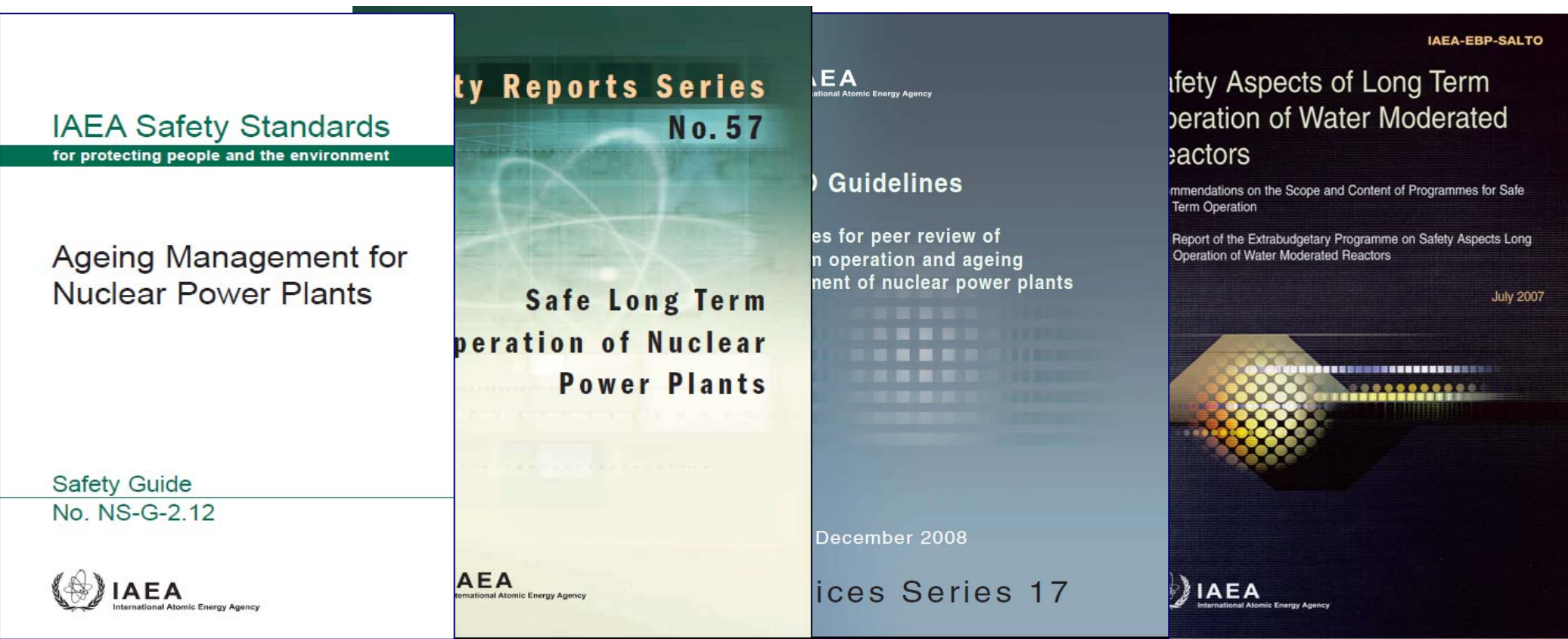
- Steam generators( 1997)
- Concrete containment buildings (1998)
- CANDU pressure tubes (2001)
- PWR Reactor Vessels (1999)
- PWR Reactor Vessel Internals(1998)
- Metal components of BWR containment systems
- I&C cables (2000)
- CANDU reactor assembly
- PWR primary piping (2003)
- BWR Reactor Pressure Vessel (2005)
- BWR Reactor Pressure Vessel Internals (2005)
- Updating of PWR Reactor Vessels (2007)
- Updating of PWR Reactor Vessel Internals (2007)



# For Safety Enhancement

Developed Safety Long Term Operation approach and Guidelines

- Safety Guide : NS-G-2.12, Ageing Management for NPPs (2008)
- Safety Report : SRS- 57, Safe Long Term Operation of NPPs,(2008)
- EBP : Safe long term operation for water moderated reactors(2007)
- Safety Series : SS-17, SALTO Guidelines for peer review of LTO (2008)

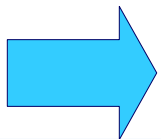


# Generix Component specific guidelines (3)

**“Assessment and Management of Ageing of Major NPP Components Important to Safety”**

## Common Contents

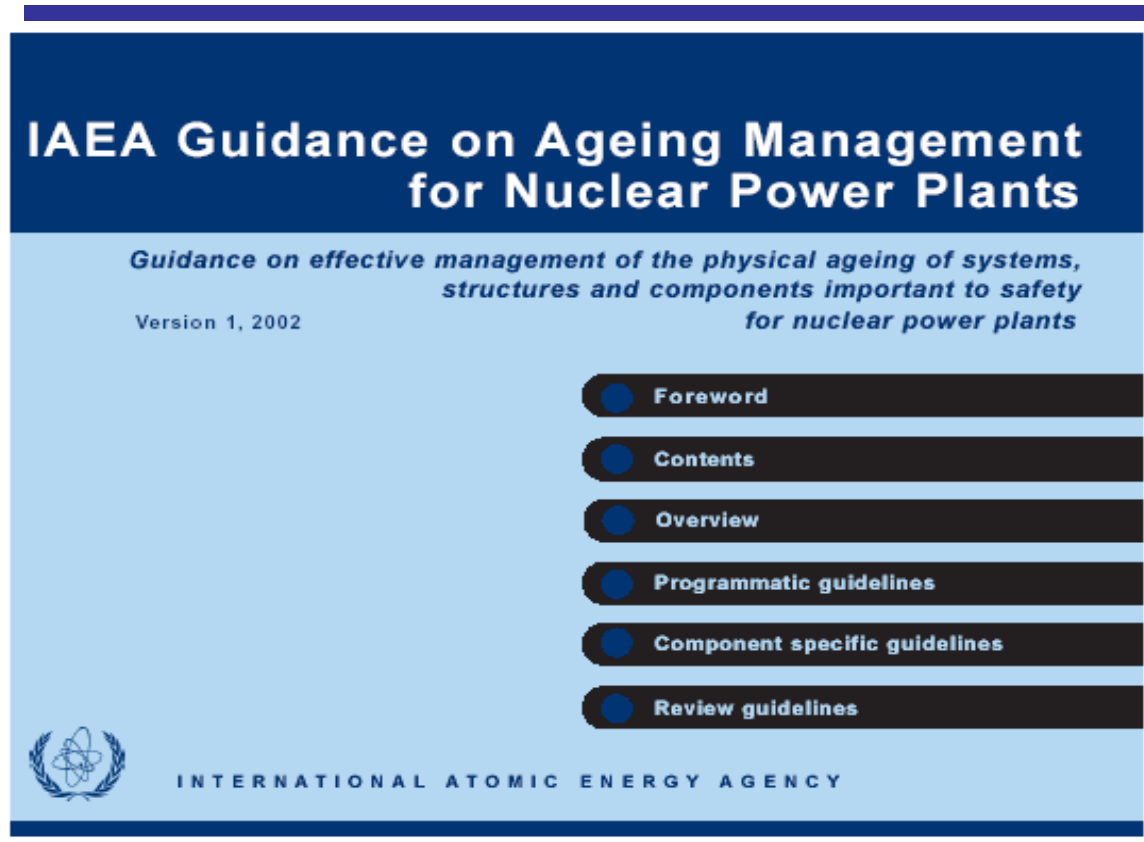
- **Component description**
- **Component design basis, Fabrication and Materials**
- **Potential ageing mechanisms (Degradation)**
- **Operating Conditions**
- **Inspection, monitoring and maintenance requirements, techniques and practices**
- **Methods for the assessment of degradation**
- **Methods for the mitigation of degradation**
- **Systematic component specific ageing management programme (AMP)**



**Please Keep the current chapters to meet with other TECDOCS**



# Ageing Management Programme



- **Programmatic Ageing Management Guidelines**
- **Component Specific Ageing Management Guidelines**
- **Ageing management review guidelines**

