

Table top exercise: Application of AM guidance to electrical cables

Module 10

Resource document: Assessment and management of ageing of major NPP components important to safety: In-containment I&C cables, TECDOC-1188 (2000)



IAEA

International Atomic Energy Agency

Presentation

1. Explanation of the exercise and expected results
2. Organization of working groups (WGs)
3. Exercise process

1. Explanation of the exercise and expected results

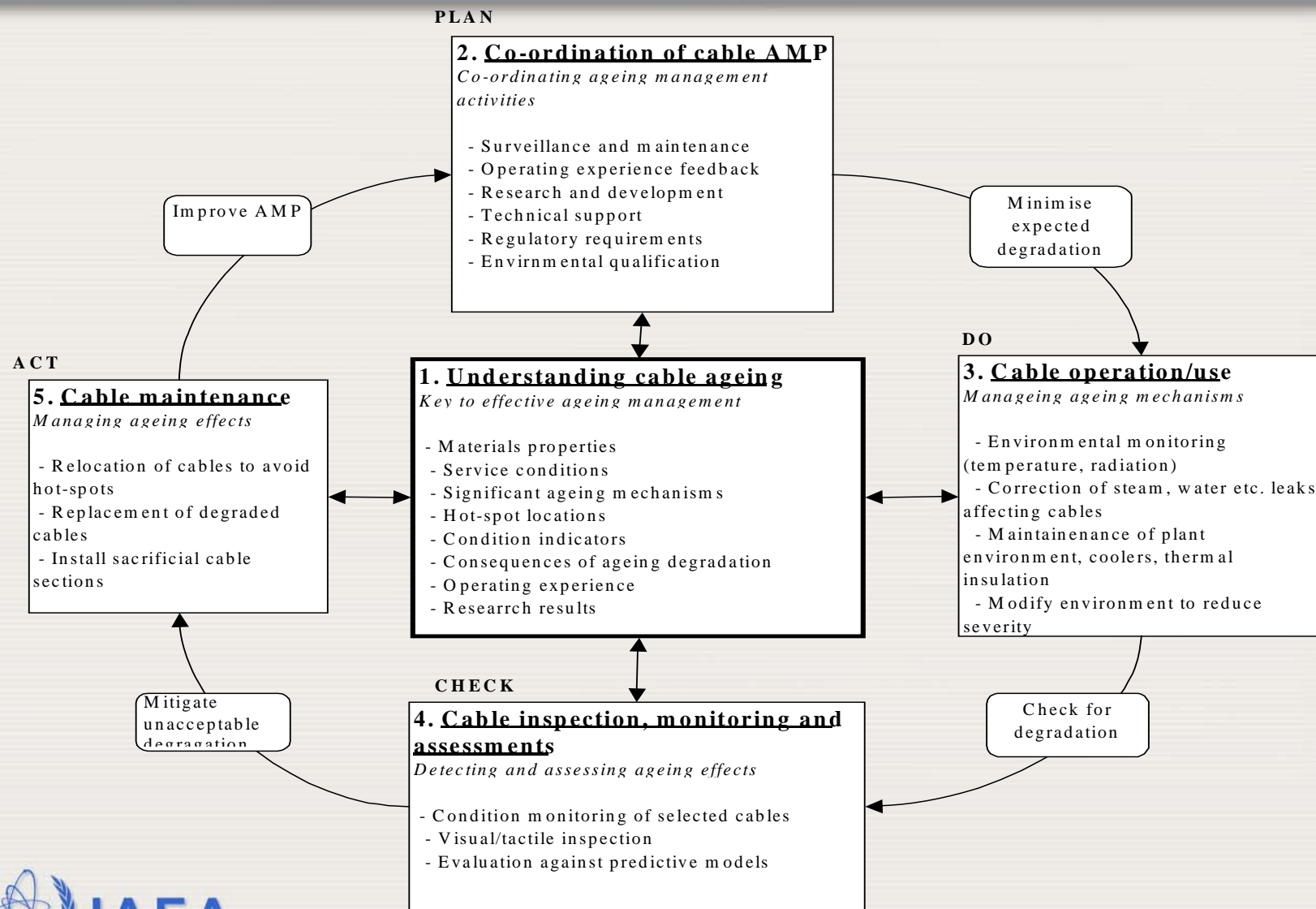
Background

Cable ageing management programme (AMP)

- Proactive AMP can ensure electrical functionality of electrical and I&C cables throughout NPP service life

- Benefits:
 - increased confidence of the el. functionality under all service conditions, incl. DBE and post-DBE
 - provides assurance of design life and facilitates life extension considerations
 - facilitates preparation and assessment of a licence renewal application

Systematic AM process for electrical cables



Key attributes of cable AMP

- Focus on cables of concern, i.e. cables with greatest potential to adversely affect NPP safety and availability
- Knowledge of actual plant environments to predict ageing degradation and focus the AMP effort
- Knowledge of cable materials to predict their degradation and select appropriate AM actions
- Visual inspection & condition monitoring to provide information on the state of cable materials
- EQ programme balance between conservatism and uncertainties needs to be considered when deciding how much reliance can be put on the EQ programme

Assignment

- Address one of the key attributes of Cable AMP (in parallel working groups)
- Elaborate and present what you do at your NPP to achieve the assigned attribute

Expected results

- Summary of current practices relating to the assigned attribute
- Significant weaknesses in the current practices, if any (what and why)
- Recommended improvements (what and how)

2. Organization of working groups (WGs)

WG No.	1	2	3
Topic			
WG Chair			
Rapporteur			
WG members			

Roles of participants

- **WG chairman**
 - **directs the exercise in his/her WG**

- **WG rapporteur**
 - **records main points/summary of WG's discussion**
 - **prepares with WG chairman a presentation on the current status and desirable improvements**

- **WG members**
 - **present relevant experience**
 - **participate in discussions**

3. Exercise process

For an assigned key attribute of the cable AMP:

- Share relevant experience to identify current practices

- Discuss current practices to identify
 - **significant weaknesses, if any**
 - **desirable improvements**

- Prepare presentation of the discussion outcome

- Present and discuss results of the exercise