1st Topical Peer Review Public event – 3rd May 2018 Brussels

Mr. B. Tomic
PM, Thematic group CABLES

Reliable & functional cables crucial for nuclear safety

Ageing affects cables in different ways, potentially causing their inoperability

The scope of TRP includes:

All electrical cables important to safety, power (high & medium voltage), I&C, neutron instrumentation cables

All elements of "cable" commodity (Conductor; Insulation; Armoring/Shield; Jacket, sheath; Termination arrangements)

Identification of methods & criteria for selecting cables for AMP

Processes/procedures for identification of ageing mechanisms

Grouping criteria to implement ageing management

TG Cables

Ageing assessment of cables:

> Ageing mechanisms requiring AM/ their significance
>
> Acceptance criteria for specific ageing mechanisms
>
> Key standards used for SSC specific AMP
>
> Key documents used; R&D and OPEX

Monitoring, testing, sampling and inspection activities

> Programmes & frequency for monitoring, testing; Acceptance criteria
>
> Test methods used
>
> Key features of inspection & surveillance programmes
>
> Identifying trends, and progressive incl. unexpected deterioration

Preventive and remedial AM actions

> Criteria for defining appropriate AM actions;
>
> Procedures for deciding on & implementing AM actions;
>
> Description of AM actions (to be) implemented

TG Cables

European Nuclear Safety Regulators Group

Review process

    Nine TG experts + rapporteur + PM (11 countries)

    Total of 493 questions related to cables raised

    Of those, 152 from TG Cables

Identification of challenges and Good practices

    Separately for NPPs and for Research reactors

    12 Good practices & 25 challenges/areas for improvements for NPPs

    4 Good practices and 11 challenged for RR identified

    10 issues for NPP & 3 for RR in developed detail-input for WS:

        Systematic identification of degradation mechanism

        Decision criteria for useful life and related uncertainties

        Techniques for detecting degradation on inaccessible cables

        Cable deposits for accelerated ageing- most demanding locations

        How pertinent are methods for NPP to be applied on RR