Ensuring Quality of Nuclear Components

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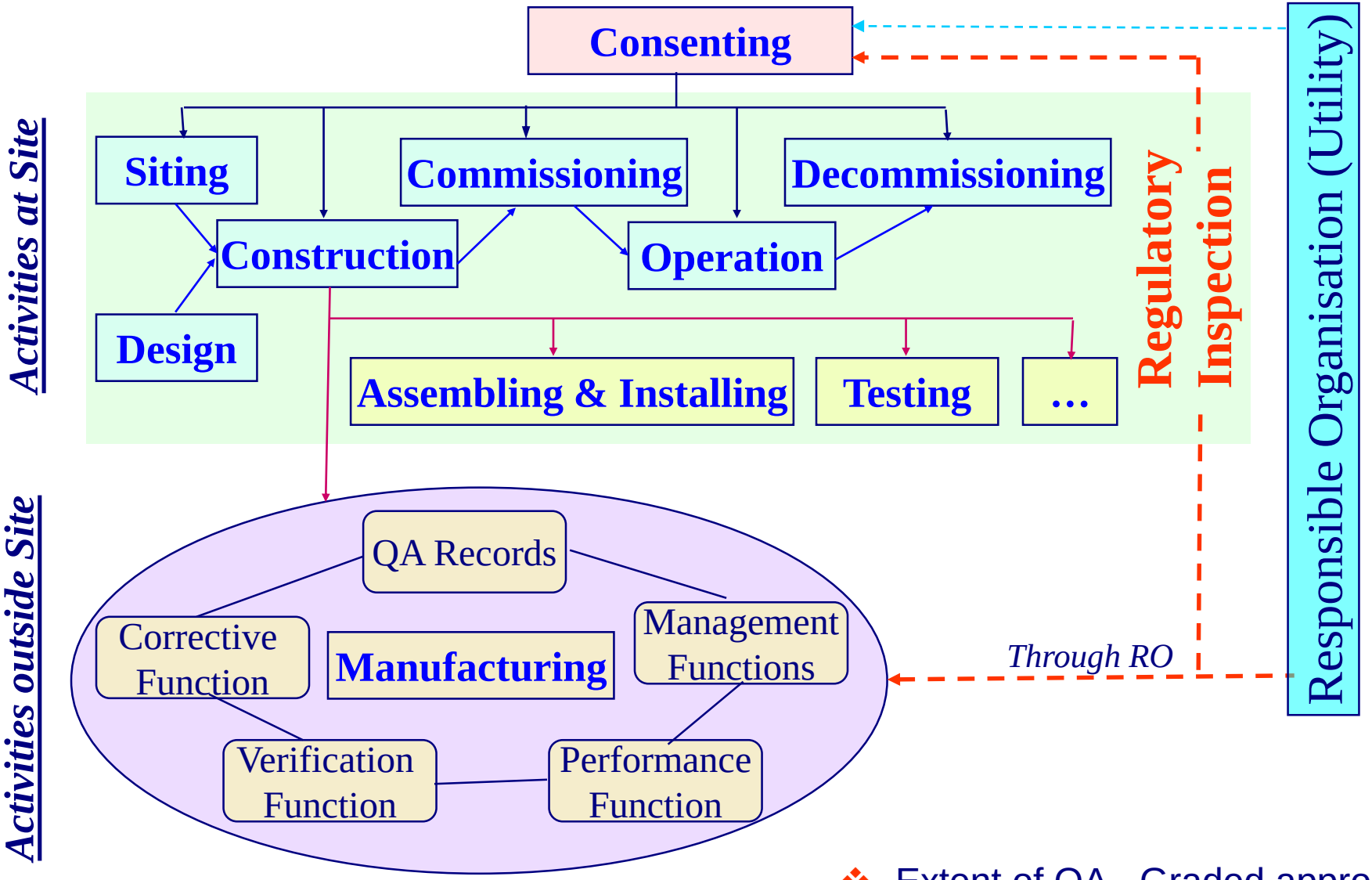
Regulatory Oversight - QA



- Extent of QA - Graded approach

Codes and Guides - Quality Assurance

- **DID-I:** Sound design, manufacture and construction with appropriate quality and engineering practices

AERB/SC/QA (1988, 2009) Code of Practice on QA for Safety in NPPs

AERB/SG/QA-1 (2001) QA in the Design of NPPs

AERB/SG/QA-2 (1998) QA in the Procurement of Items and Services for NPPs

AERB/SG/QA-3 (1998) QA in the Manufacture of Items for NPPs

AERB/SG/QA-4 (2001) QA during Site Construction of NPPs

AERB/SG/QA-5 (1993) QA during Commissioning and Operation of NPPs

AERB/NPP/SG/QA-6 (2005) Establishing and Implementing a QA programme for NPPs

AERB/NPP/SG/QA-7 (2005) Assessment of Implementation of QA Programme in NPPs

AERB/NPP/SG/QA-8 (2006) NC Control , Corrective & Preventive Actions for NPPs

AERB/NPP/SG/QA-9 (2006) Document Control and Records Management for QA in NPPs.

Points for Discussion

1. **Design modifications during manufacturing:** results into modification in layout, shielding and NDE etc. Coordinated approach between design, manufacturing and construction agencies is needed.

2. **Control & safety awareness of subcontractors:** Generally QA was limited to ensuring QAP records without emphasizing process importance by executing agency. Enhancement of control over activities like field supervision, knowledge & importance of activity during actual process in addition to record review.

3. **Adequate QA manpower:** Inadequate / untrained QA manpower will not ensure needed QA. Adequate qualified manpower needed to ensure required QA coverage as per safety significance of the component.

4. **Standardisation:** Similar activity is executed in different ways at different sites & face similar type of problems. Experience exchange by different agencies will avoid repetition of similar causes and also avoid invitation of unknown causes.

5. **Preservation of components:** Lack of preservation cause severe non-postulated degradation of components. Managing preservation (including FME) especially during delays & requalification of these components.