

# Principles of regulatory oversight of licensee's use and control of contractors in a Finnish NPP construction project

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# Outline

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# General

Finnish legislation (Government Decree on the Safety of NPPs) contains two basic requirements for management system:

- The licensee shall commit its suppliers, sub-suppliers and other partners participating in functions affecting safety, to adhere to the systematic management of safety and quality
- Systematic procedures shall be in place for identifying and correcting deviations significant in terms of safety

# General

This means in practise that:

- The licensee has to oversee that the quality system of subcontractors and subcontractors activities are according to the set requirements
- The licensee has to ensure that the contractor's management system contains procedures for the handling of process and product related non-conformances and the procedures are followed

# Challenges with Multinational Contracting and Manufacturing

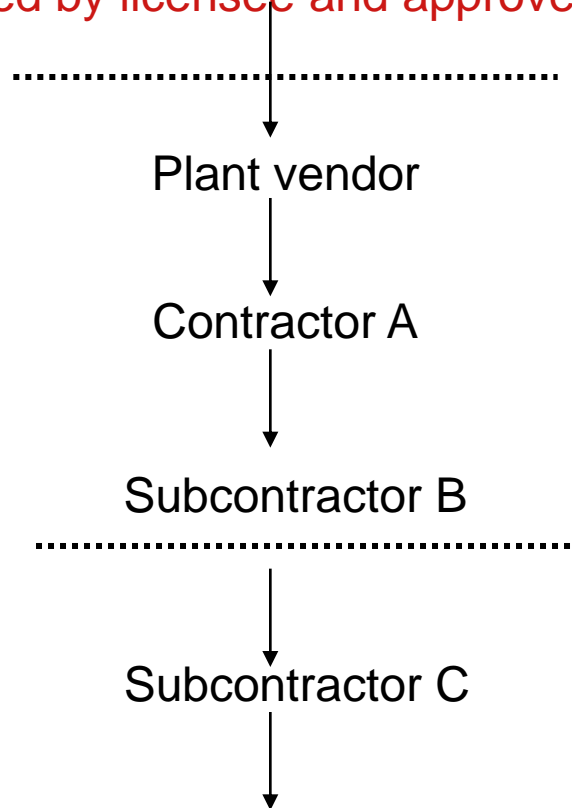
The subcontracting chains in a NPP construction project may sometimes be quite lengthy.

- Because of many interfaces in the lengthy contracting chains it is a challenge to the licensee to ensure that the regulatory and contractual requirements have been met by the contractors and subcontractors
- However responsibility for the nuclear facility's safety rests with the licensee whether or not the licensee chooses the contractors or subcontractors

# Multinational Contracting and lengthy supply chains

**Input:**

Specific requirements for the products,  
defined by licensee and approved by STUK



**Output: Standard products**

# Challenges with Multinational Contracting and Manufacturing

The lengthy contracting chain has most probably negative impact on the handling of non-conformances due to several interfaces in the handling process

In new projects it is essential to ensure:

- the NCR handling process in a NPP construction project is established to avoid vain bureaucracy and minimize the interfaces whenever possible
- well designed NCR handling process is implemented from the start of the NPP construction project
- one of the main objectives of the NCR handling system is the fast implementation of corrective actions

# Challenges with Multinational Contracting and Manufacturing

NPP construction project has specific quality management requirements

- A major challenge to the licensee is to assure that applicable regulatory requirements are transferred to and understood by all contractors in the supply chain
- The licensee shall ensure that the final design and quality control documentation are transferred through the whole contracting chain to the final contractor qualified to perform the work



# Principles for the Licensee's Oversight of Plant Vendor and other Contracted Services

The licensee's responsibility in the NPP construction project is to control the activities of both direct and indirect contractors performing safety related work

To cope with this requirement the licensee's management system shall include the contractor overall oversight process.

The key elements of the oversight are:

- the process follows the licensee's safety and quality policy
- assessing and approval of contractors shall be a formal process and,
  - completed prior to performing the work/order

# Principles for the Licensee's Oversight of Plant Vendor and other Contracted Services

- audits should be used as one of the assessment method
  - audits shall be performed by licensee's QA staff

Licensee's general audit finding:

Considerable number of the audited organizations have totally failed e.g. in performing the internal audit programmes in spite of ISO-certificates

# Principles for the Licensee's Oversight of Plant Vendor and other Contracted Services

The most useful tools for providing assurance of quality is the Project Specific Quality Plan to supplement the contractor's management system.

The contractor shall finalize the quality plan prior to work.

The licensee shall approve the Quality Plan and assess the proper implementation of the Plan.

The licensee shall give the guidance for the content of the quality plan

# Principles for the Licensee's Oversight of Plant Vendor and other Contracted Services

The licensee should grant the contractor qualification for a limited time period

The oversight shall continue during the contracted work and not only in the approval stage.

The oversight shall be based on

- follow-up audits
  - surveillance during the manufacturing process (QC)
- surveillance should be focused also on organisational issues
  - witness and hold point inspections

QC personnel should be trained to perform also QA assessment

# Principles for the Licensee's Oversight of Plant Vendor and other Contracted Services

The oversight of a design organisation is more complicated because of no inspection and test plan with hold and witness points

The oversight should be based on:

- audits and follow-up audits
- the results of design documentation reviews

The reaction to deviations and faults detected through design documentation reviews should be fast

The activities of the design organisation should be reassessed to reveal the weaknesses in design process

# Important Elements of Regulatory Assessment of the Licensee's Oversight

Key elements of the regulatory oversight:

- to stop the contractor's work when justified shall be also regulator's right and responsibility
- the oversight shall give assurance that the latest revisions of manufacturing documentation is in use
- the oversight including inspections shall give an assurance about the final conformity of the product

# Summary

It will be a challenge in the new NPP construction projects to ensure:

- the resources and competence of the QA personnel
- the implementation of the NCR handling process through the supply chains from the start of the project
- the implementation of the requirements of the IAEA standard GS-R-3
- the surveillance is focused also on the organisational issues and will be continue during the contracted work

# Thank You!