

OSART Good Practices
CORP. PROCUREMENT
Procurement of nuclear fuel

CEZ corporate, Czech

Mission Date; 29 Sep.-9 Oct., 2013

Nuclear Fuel Quality Control and Inspection performed by Third Party

Description

Pursuant to the Nuclear Fuel Contracts governed and managed within Nuclear Fuel Cycle Unit for the Owner of the NPPs, there exists a provision enabling assignment of a resident surveillance body to any Nuclear Fuel Supplier facility for all or any part of the time Nuclear Fuel production for the Owner is being performed in such facilities. Following this, there is established by the Owner a contract in cooperation with the company independent of the Supplier, regarding continuous monitoring, surveillance, inspection and acceptance of Nuclear Fuel and all its components in the Supplier's fabrication plants during all phases of fabrication.

Benefits

The Owner is continuously acquiring both overall and detailed reports containing independent and objective information on all, either standard or non-standard aspects of Nuclear Fuel manufacturing and inspection process, not only in accordance with quality control and inspection plan agreed upon among the Owner, Supplier and independent body.

Results

The purpose of the task is to have available upper level of information on surveillance of Nuclear Fuel fabrication process. An important attribute of the activity is the principle of separated – individualized evidences of Nuclear Fuel components relative to the manufacturing of the Nuclear Fuel for the Owner in every phase of production chain.

Extended scope of Nuclear Fuel Fabrication Data

Description

Pursuant Nuclear Fuel Contracts governed and managed within Nuclear Fuel Cycle Unit for NPPs, a Nuclear Fuel Fabrication Data file is provided by the Fuel Supplier for ČEZ's disposal for each fuel batch delivery. Data is gathered by the supplier in accordance with contract technical specification structure that is continuously reviewed and updated following fuel manufacturing and inspection methods in the fabrication plant. Upon handover to ČEZ, the data is stored and maintained in a database operated by the Fuel Cycle Unit staff for different purposes.

Benefits

This process is transparent, both in the general and detailed knowledge on Nuclear Fuel fabrication material characteristics individualized to each Fuel Assembly delivered to ČEZ.

Results

Existence of a Nuclear Fuel Database that is applicable for different analyses of Nuclear Fuel characteristics, such as trends in uranium balance tolerances, Zirconium alloys investigations, and inputs for safety analyses calculations. A high level degree of information relative to Nuclear Fuel is available to the NPP Owner for independent safety related research and enables qualified discussion with the Fuel Supplier in this task area as well as the appropriate response to each possible negative impact in fabrication process.