

S1: Strategy of Commissioning and Operation of 1300MWe PWR¹

Part of a training path: PWR LONG Training / S1

Duration: 15 days (105 hours)

Language: French – English

Participants: 06 – 12

Location: Paris, other location on request

Level: Expert

Contact: formation.reacteurs@framatome.com

You are:

An engineer or technician willing to acquire an experience of operation of a PWR

Prerequisites:

Good basic theoretical knowledge of PWR operation

During the training you will:

- Perform normal operation activities on simulator according to OTS²
- Expand your knowledge on PWR commissioning phase

After the training, you will be able to:

- Analyze objectively the operating status of the reactor by respecting the design assumptions and operation technical specifications of the reactor
- Understand the architecture and the principles of the reactor design
- Apprehend the operation of the reactor by objectively analyzing dynamic evolution of NSSS³ parameters (physical, neutronic and thermodynamical) during normal operation transients
- Identify any abnormal deviation in parameters to support the operator in its choice of appropriate measures regarding abnormal situations of operation

Course strengths:

- Involvement of specialists and experts
- Application of theoretical learning by the use of simulator

- Training course enriched by the experience feedback of power plants in operation
- Exchanges and experiences sharing

Program

Theoretical learnings:

- Regulation systems of the power plant
- Normal, incidental and accidental operating procedures
- How to use the different operation means regarding neutronics and regulations
- Safeguard and safety systems

Application on simulator of the procedures studied earlier

- Evolution since the cold shutdown towards nominal conditions in hot shutdown, then sub-critical and critical hot standby while configuring the primary, auxiliary, secondary and electrical circuits in accordance to the procedures
- The 100% nominal power escalation and return to cold shutdown conditions
- The introduction of failures, incidents and accidents
- Main transients such as house load operation
- Hydrotest operation on the RCS⁴

² Operation Technical Specifications

³ Nuclear Steam Supply System

⁴ Reactor Coolant System

¹ Pressurized Water Reactor