The challenge

In case a of a severe accident (typically if core temperature would reach 650°C) the operators and the crisis team must have at their disposal a clear, easy-to-use, non-redundant guideline that will help them stabilize the situation of the reactor while minimizing radioactive releases.

The solution

AREVA can propose to develop a complete integrated OSSA procedure integrating the specificities of the plant. It includes:

- Transition from Emergency Operating Procedures to OSSA
- Implementation of immediate actions
- Continuous assessment of plant conditions
- Identification of candidate strategies and implementation
- Monitoring of plant response

AREVA can also complement existing SAMG to incorporate new requirements, to extend them to the coverage of reactor shut-down states and of fuel damage in the spent fuel pool.

Structure of OSSA Package

- Technical Background Report (TBR) to provide to the technical support team with technical details and justification of severe accidents mitigation
- Support Studies Report to justify the severe accidents mitigation strategies and define the setpoints
- Operating Guidance – to present ergonomically the content of the TBR. It provides:
  - simple diagnostic tool
  - immediate actions and candidate strategies that call for system guidelines (system line-ups and limitations for severe accidents, etc.)
  - other support documents (computational aids, communication sheets, etc.)
- Options: validation of the SAMG, severe accident training of involved teams
Severe Accident Management Guidelines
OSSA: Operating Strategies for Severe Accidents

Multinational experience

Licensing / standard compliance:
Compliant with IAEA guides and recommendations
Licencing of OSSA Flamanville 3 in progress at French safety authority (ASN)

References:
OSSA Olkiluoto 3 EPR™, Finland
OSSA Flamanville 3 EPR™, France
OSSA Taishan 1&2 EPR™, China

Your benefits at a glance

• Avoids potential conflicts between preventive and mitigating strategies thanks to a clear independent OSSA document

• Optimized ergonomics of operating guidelines allows more simple and easier handling of stressful severe accident situations

• Minimizes repetition of system information

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