

## SUBJECT 11

### CONSEQUENCES OF POSSIBLE ACCIDENTS

The different failures of the plant lead to the definition of accidental scenarios. For each scenario are evaluated the occurrence probability, the consequences in terms of damage to the plant and of impact on public health outside the site.

The measures introduced in the framework of hazards management are taken into account when they are not affected by the accident. Nevertheless, failures are also postulated by hypothesis on these steps. Thus, the analysis studies the consequences outside the site of a core meltdown by failures of the different successive designed steps.

All of the measures taken at the design and operating levels to control the hazards that Flamanville 3 could face further reduce, in comparison to the plants which are currently in use, the occurrence of incidents and accidents and limit the consequences outside of the site. Thus, the probability of a core meltdown is divided by 10. In the case of a nuclear accident in the unit, no counter measure involving confinement or the evacuation of neighbouring populations is necessary. The doses estimated during accident conditions do not exceed 10 mSv, which is the threshold of counter-measures initiation in the framework of the Particular Intervention Plan (PPI). In the extreme and hypothetical case of a core meltdown, the steps implemented allow to avoid evacuation or rehousing of neighbouring populations; only a confinement limited to the immediate vicinity of the site would have to be considered.

Specific organisations and also particular technical and human means are foreseen and periodically tested for such accidental conditions in the framework of the Urgency Internal Plan (PUI) managed by the operator of the plant and of the Particular Intervention Plan (PPI) managed by the prefect of La Manche.

Concerning classical accidents (fire, explosion, ...), the analysis performed by taking into account the measures introduced to reduce the occurrence or the consequences (toxic cloud, missile ejection, ...) of the hazard concludes to the absence of scenario able to lead to harmful effects outside or inside the site. All scenarios reveal a probability range from residual to middle with moderate consequences.

☞ TO FIND OUT MORE, please see:

- **Document 5** *Piece D - Chapter V: Consequences of accidents during operation*
- **Document 5** *Piece D - Chapter VI.2: Organisation in accidental conditions*
- **Document 5** *Piece D - Chapitre VI.3: External information*