

# Human Factors

## **ES-konsult works with Human Factors – to achieve safe nuclear power**

*For a safe nuclear power it is essential that human preconditions are taken into account in all areas of business. ES-konsult has a substantial experience and knowledge within the field of Human factors and how technology and organization should adapt to human preconditions.*

### **Operating Experience (OPEX)**

It is vital from the safety point of view to use the experience gained from past events to prevent them from happening again. Our extensive experience in this nuclear industry enables us to have a good overview of internationally important nuclear events, altered requirements, aging problems, modernizations etc.

### **Work methodology**

Regarding the consequences a serious incident at a nuclear power plant could imply, it is of great importance that the staff carry out their duties safely. A well thought-out methodology for how the work should be carried out and how a safe approach is achieved, is essential.

### **HSI in design**

ES-konsult, at present, is developing and applying methods of how to design new operator interfaces in the context of control room design. This includes, among others, analysis of duties, developing of a new interface, verification and validation of the changes and project management. The work is carried out on the basis of a long experience in the topic HIS, control room in general, e.g., operation, conducting simulator courses

### **Examples of completed projects:**

- Development of the methodology (procedures and tools) for reviewing and designing the new operator interface at Forsmark 3 NPP (TIGER)
- Verification and validation of the changes of the control room at Ringhals 2 NPP and Forsmark 3 NPP
- Development and administration of international databases with the purpose of collecting experiences and events in for instance Common Cause Failures (CCF) and Fire.
- Designing of process and methodologies of handling operating experiences at OKG NPP

**Contact:** Magnus Nygren: [magnus.nygren@eskonsult.se](mailto:magnus.nygren@eskonsult.se)