

INBOP_{eration}S, LTI and CNGS

- INB activities, in general, concern:
 - Zonage
 - Traceability
 - Waste management
 - Documentation
- LTI and CNGS are fully implicated within the INB, like SPS and LHC
- The operational scenario for the SPS will be defined in the coming months under a new project which has yet to be established
- Some controls requirements are already clear

Waste Management

- This is a driving factor in many of the operational activities
 - well documented (full radionuclide inventory), compacted, low level activity waste - has a minimum cost ~30 kCHF/m³ for disposal
- Classification of materials coming from within the 'Installation' is based on the zonage
 - which is established on the basis of the original design, calculations and operational history/experience - NOT MEASUREMENT
- Once classified in a radioactive category, equipment cannot be de-classified
 - the number of anomalies in the zonage should be minimised (zero)

Logging and Monitoring

The following data are required to establish a full history and as input data for simulations

- Beam currents and energy
- Beam losses and their distribution
- Optics configuration (including steering)
- Radiation monitoring

Other Components with INB Constraints

Some of these may have implications for the control system

- Quality control
- Control and interlocks of equipment with significant safety implications (Eléments Important pour le Sécurité)
- Access control

The following are important but unlikely to have controls implications

- Traceability system
- Radiation surveys and measurements (sampling and checks on equipment removed from the perimeter)
- Individual dosimetry

Conclusions

- I NB Operations impact mainly on monitoring and logging within the control system
- Access control and E I S will feature in I NB documentation and the regular inspections.
- I NB quality assurance will have an impact on all of the systems mentioned
- A permanent record covering the life cycle of LTI and CNGS components is essential for proper waste management