Safety Issues

• Computerised Systems are used in Nuclear Installations
• Most are not of Safety Significance
• Safety systems are most likely not date dependant
• Probability of the event = 1
• Common cause of failure at the same time

What about the safety case hypotheses?
Safety Issues

- Diversity of computerised systems still holds
- Loss of off-site power situations
- Communication
- Crisis management

Analysis should cover more than safety systems
Licensee is responsible for Y2K readiness demonstration

All nuclear installations

- Power stations
- Research reactors
- Fuel cycle (production, transport, reprocessing)
- Wastes repositories
- Industrial irradiators
- Military facilities
- ...
IPSN approach (1/3)

• Analysis by multi-competency team
  ▪ site assessors
  ▪ I&C
  ▪ human factor
  ▪ operation and accident management

• Definition of Licensee analysis contents
IPSN approach (2/3)
Licensee analysis content

• Specific organisation for Y2K problems analysis and resolution

• Installation sensitivity
  ▪ equipment
  ▪ consequences of potential failures
IPSN approach (3/3)

Licensee analysis content

• External Resources needed for short term and long term (Grid, Fluids, Teams, ...)
• Organisation for Y2K conversion tests
• Contingency plans allowing for defence in depth
• Other dates (9/9/99, 29/2/00)
IPSN strategy

- Consultation with Licensee and Follow up
- Examination of the documents
- Audits and inspections
- Experience feedback from other industries
- IPSN experience conducted on Y2K conversion
- International follow-up through OECD, IAEA, EC, ...
  I&C 4 parties group
  ...

...
French NPPs

- 1 licensee: Electricité de France
- 58 PWRs
  - 900 MWe: 34 units
  - 1300 MWe: 20 units
  - 1400 MWe: 4 units
- 78% of Total
Overall Approach for French NPPs

EDF Methodology

- National consolidated inventory
- Equipment Modifications
- Implementation
- Contingency

Functional Analysis

Off Site Loss of Power

Y2K Project team
- Planning follow up
- Audits
- Analyses
- Support to inspections