



YEAR 2000 and NUCLEAR SAFETY

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 ?



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Safety Issues

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

**Analysis should cover more than
safety systems**



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IPSN Analysis Targets

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**
- **...**



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IPSN approach (1/3)

- **Analysis by multi-competency team**
 - **site assessors**
 - **I&C**
 - **human factor**
 - **operation and accident management**
- **Definition of Licensee analysis contents**

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IPSN approach (2/3)

Licensee analysis content

- **Specific organisation for Y2K problems analysis and resolution**
- **Installation sensitivity**
 - equipment
 - consequences of potential failures

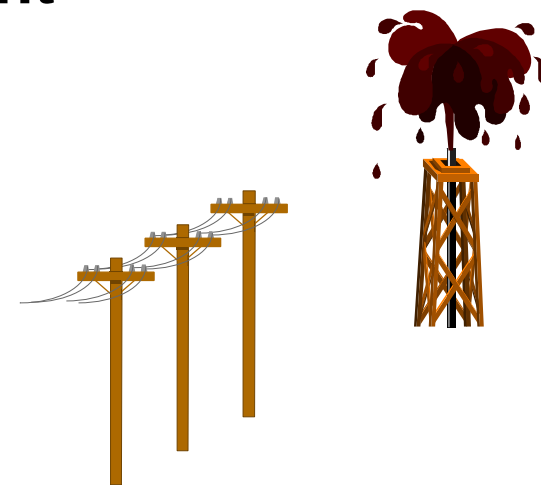


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IPSN approach (3/3)

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)**





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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**
 - ...**



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French NPPs

- **1 licensee : Electricité de France**
- **58 PWRs**
 - **900 MWe : 34 units**
 - **1300 MWe : 20 units**
 - **1400 MWe : 4 units**
- **78 % of Total**



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Overall Approach for French NPPs



Y2K Project team
Planning follow up
Audits
Analyses
Support to inspections

EDF Methodology

