
Moving towards Licensing of Geological Disposal Facilities in Europe - Lessons from the WIPP

**IGD-TP Strategic Research Agenda
Exchange Forum**

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Waste Isolation Pilot Plant

- Located in southeastern New Mexico
- Bedded salt formation
- Disposal of transuranic waste from US DOE defence programmes – (contact handled and remote handled)
- Schedule
 - 1974 Site selected
 - 1981 First shaft excavated
 - 1988 Facility ready for waste receipt
 - 1993 DOE Carlsbad Area Office established
 - 1996 Compliance Certification Application (CCA) submitted
 - 1998 Certification by EPA
 - 1999 Disposal operations commence

Reasons for Success - Management

- Project management – local office and schedule driven
 - Use of PA to prioritise required R&D work in view of remaining uncertainties and project timescales, *and elimination of unnecessary R&D activities*
 - Shift from science-driven project to licensing-driven project
 - Determined leadership by CAO, but gradual acceptance within project that licensing needs and schedule drivers were imperative
- How much information is enough?
 - GDF development programmes running over decades are information rich and much shared information between countries
 - When a project director says the license application must be ready!

Systems Prioritisation Methodology

- A risk-informed approach to decision-making to prioritise the R&D needed to move to licensing
- Tool for systematic consideration of trade-offs:
 - Between current understanding of system performance and associated uncertainties, and likelihood that the outcomes of particular R&D could reduce uncertainty / increase confidence in licensing case
 - Between likelihood of R&D increasing confidence in system performance and programme COST
 - Between proposed R&D and programme SCHEDULE
 - Also considered modifications to design and operation

Reasons for Success - Governance

- High level of continuing political and local public support – timely passage of enabling legislation
- Regulator-proponent dialogue
 - Robust CCA; iterative approach; responding to queries
- Ongoing independent review
 - Iterative assessments in period 1989-1995
 - Peer review and stakeholder review
 - Response to comments, additional work where needed

Reasons for Success – the CCA

- **Focused on issues of importance to regulatory compliance**
 - Not everyone agreed with the level of scientific detail in particular areas
- **Several innovative information management systems aided in finding information and tracing arguments**
 - Across single iteration - 22 volumes, tens of thousands of pages
 - As PA and CCA documents are updated over time