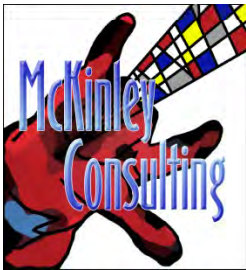


Final summary & wrap-up

Ian G. M^cKinley & Hiroyasu Takase



Quintessa

Agreed workshop aims & background

- Help JAEA develop a programme to support implementer & regulator for **geological disposal in Japan**:
 - Volunteering approach
 - Potentially huge variation in site setting & geology
 - Concept catalogues rather than reference designs
 - Most regulations not yet defined
- Completely different boundary conditions to **all** established national programmes provides special challenges
- Approach based on SDMs and total system assessment seems key to assessing host rock suitability:
 - At least some aspects of this can be developed and tested in JAEA URLs, but needs to be coupled to other JAEA modelling, lab and knowledge management activities



Output from group work (1)

Regulator (J):

- Good regulators: proceeded in a well structured manner initiated by top-level clarification of boundary conditions from the regulatory perspective (and concentrated on HLW) – e.g. definition of criteria, independence of assessment, validation, etc
- Used Day #1 output AM with some key modifications:
 - Modifications and alterations highlighted in Japanese
 - Characteristics defining suitability – focus on clear ability to review key decisions based on the SDM, including also natural hazards such as gas & Rn
 - Assessment should focus highlight most probable parameter values and assessment of robustness
 - Handling human intrusion should be considered
 - Assessment basis for rare disruptive events



Quintessa

Output from group work (2)

Implementer (J):

- Rather independently minded: initiated work with more detailed assessment of the implementer's strategy, with special focus on public confidence building.
- Good compact and structured modification of the Day #1 output AM to highlight the key technical components of the strategy. The link to public acceptance was noted, but not explicitly linked to the JAEA URL project.



Quintessa

Output from group work (3)

Site characterisation group:

- Good field team approach: proceeded in a well structured manner with very clear emphasis on the technical work programme – consider technical communication with implementers & regulators and no effort on top level constraints
- Expanded Day #1 output AM at the level of the stepwise field work supporting SDM development
- Very clear definition of terminology emphasised, especially associated with stepwise programme development (very clearly defined goals / targets needed)
- Goals need to consider also reliability and teams need input also from PA and designers



Output from group work (4)

Implementer (E):

- Very independently minded: lots of prior effort to define implementer needs
- Created a new AM focused entirely on examining what value the JAEA programme has for the implementer
- A special focus was lessons learned in JAEA phased implementation and messages that could help PI and DI selection decisions
- An issue is to look at some open questions that could be clarified (fault classification) or maybe closed (EDZ) by focused URL work
- Other issues highlighted included verifying / testing models & tools, exploration dry runs, disposal concept feasibility and associated constraints (T), support concepts (e.g. retrieval), engineering best practice, ...
- Non-technical issues also important – public communication
- Can support be provided for realistic PA model development?
- Improved understanding of different types of system uncertainty
- URL could be focus for international work (e.g. US)



Output from group work (5)

Regulator (E):

- Good regulators: proceeded in a well structured manner and provided logically structured output despite some very top-level redefinition of boundary conditions from the regulatory perspective.
- Used Day #1 output AM, but several important new issues highlighted, by directly inserting regulator-specific viewpoints, at a top level in the form of new questions
- Importance of regulatory document production highlighted along with issues associated with independence (and HR constraints)
- Siting issues: initial use of expert judgement leads to particular regulatory concerns that may be helped by URL dry runs. At the DI level, the regulator is more concerned on “comprehensive” rather than “realistic” and efforts needed to ensure completeness
- Uncertainties are also a special issue: QA and assurance of full understanding and capability to respond to surprises.
- Some special URL issues for testing regulatory processes / tools were also listed



Quintessa

Overview

- Rather amazing workshop – consistent message effectively a paradigm change in the entire approach to planning support of the Japanese deep geological programme.
 - ...could this be useful also for other national programmes in similar situations (wider distribution of workshop record)
- The group work / role playing seemed to be very efficient, capturing valuable input and also the concerns of critical players who need to agree to facilitate the progress of stepwise siting
- There seems to be a major role for JAEA – and especially the URLs – to play in helping meet some major challenges ahead. The R&D programme needs to be reassessed from the viewpoint of top level needs – as well highlighted today



Quintessa

Output and further actions

- Record of the workshop will be available very soon, including all materials presented, the various AMs produced and a summary of discussion yesterday.
- There will be opened on the JAEA CoolRep web site.
- The group output is so information- (or knowledge-) intensive that it will take some time to digest. We will thus consider having another smaller workshop to distil it down to more specific guidelines for JAEA.
- Time allowed for group work was too short: still good input when we had to stop. This will be borne in mind when future workshops of this kind are planned.

