PANEL SESSION 64B – Records, Knowledge and Memory International Workshop

Co-chairs: Russ Patterson, *US DOE*
                Tom Klein, *URS RES*
Panel Reporter: Tom Klein, *URS RES*

Panelists:
1. Abe Van Luik, *US DOE*
2. Jantine Schröder, *SCKCEN*
3. Steve Wagner, *John Hart and Associates*
4. Simon Wisbey, *NDA UK*
5. John Day, *Sellafield*
6. Eric Setzman, *SKB*

The workshop was attended by fifteen interested parties from five different countries to discuss what message should be used to warn future generations of the existence of a geologic repository for nuclear waste. **Russ Patterson** opened the workshop by welcoming everyone for attending and asking everyone present to introduce themselves.

After initial introductions, **Steve Wagner** gave a brief discussion pertaining to the decision pathway the Waste Isolation Pilot Plant (WIPP) used to develop the message for future generations identified in its passive institutional controls program. The discussion included a brief summary of the presentation he provided for session 34 which focused primarily on the five information levels of the message system used at WIPP for its passive institutional controls program (PICs). The five levels of message identified for use at WIPP are:

- Level 1 – This is a man-made site
- Level 2 – Danger
- Level 3 – What happened and when
- Level 4 – The languages to be used to transmit the message
- Level 5 – Archival of the repository information

These messages are to be incorporated into a number of different monuments, markers and locations across the WIPP footprint. However, since development of this program, it has been identified that the larger monuments design cannot be constructed. Also the earthen berm surrounding the location cannot be constructed as initially designed. As a result, the US Department of Energy (DOE) is interested in the international activities currently being led by OECD NEA Project entitled "Records, Knowledge & Memory" (RK&M).

Abe Van Luik added to the discussion of the WIPP PICs program by stating that the WIPP program includes an active institutional program (AIC) for the first 100 years after closure. The AIC program will include fencing and active human involvement to ensure there is no inadvertent intrusion.

Jantine Schröder added to the discussion by presenting the part of her presentation (during session 34) which outlined the "what, why, when, who and how" which are the key questions asked by the RK&M program.

The group then discussed the need for multiple messages. One message that would be for the near-term, approximately 200 years, and another message that would be more detailed to cover the long-term, 200 – 10,000 years (or as long as possible). Attendees from the DOE office of Legacy Management (LM) asked what would happen if the current government does not exist in the future. The group discussed this possibility and came to the agreement that the local community would have to be involved in the siting and message to ensure local knowledge of the repository is retained. It was also agreed that both oral and written knowledge of the site would be required.

The group then discussed what records needed to be maintained pertaining to a nuclear waste disposal site. DOE LM stated that they currently retain many records covering the categories of historical, permanent records with various retention times as part of the national archive. The retention times for permanent records under LM range from 75 years to indefinite. Internationally, most developed countries have archives for various records but it is not known if they are similar to that retained by DOE LM.

The consensus of the group was that a standard that defines both the near-term and the long-term messages, and guides each country on developing a message, needs to be developed. This standard should be flexible enough to include the local community's input. The near-term message should be both oral and written with minimal detail while the long-term message should be greater in detail to overcome the loss of knowledge over time.

This standard should include the following categories:

- What – what records need to be maintained?
- Why – for what purpose are these records to be maintained?
- When – over what timescale are these records to be maintained?
- Who – who is to maintain and develop these records and who are these records for?
- How – how to provide the maximum continuity, accessibility and awareness through the RK&M group?

It was the unanimous decision of this workshop that additional workshops need to be performed to fully understand this topic and develop an international guideline for not only the message to be retained for future generations, but also how the records and knowledge supporting that message will be retained.

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