

Session 4 Round table- Regulatory framework for spent fuel management

The Round Table addressed four questions.

The first was: Is there enough emphasis on safety standards for spent fuel management?

The general view of the experts was that, taking into account the evidence from around the world that spent fuel is being managed safely, there is no immediate need for new safety standards. It was recognised, however, that standards should be continuously updated to reflect new knowledge and experience gained and that the standards in this area had been in existence for quite some time. Some areas were identified where more guidance could usefully be developed, for example, in relation to extended long-term storage and there was a suggestion that there could be greater harmonisation in certain areas, such as international requirements for dry cask design. It was noted that it is too early for detailed standards in this area and the emphasis should still be on principles rather than on quantitative technical criteria.

The second question was: Is there sufficient international consensus on the approaches to demonstrate the safety of geological disposal?

There is a general consensus among experts in the field that geological disposal is likely to be a viable and safe technology and that, at least qualitatively, safety should be capable of being demonstrated.

A number of issues were raised however. One concerned the elements that need to be considered in a geological disposal facility safety case and how long-term integrity issues are to be addressed. It was also noted that although the introduction of the concept of retrievability in some disposal strategies might imply that there is not a full consensus on long-term repository safety, many stakeholders took comfort from the 'promise' of retrievability. There was a call for greater clarification of terminology, for example, terms such as 'retrievable', 'final closure', and 'management after closure'. The IAEA and NEA are addressing many of the issues raised here in standards and guidance. It was pointed out that these organizations have an important role to play in ensuring close collaboration between countries engaged in licensing geological repositories.

The third question was: Is it possible to achieve international consensus on the future strategy for spent fuel management?

At the present time it is not possible to have an international consensus on a strategy for spent fuel management when countries have different positions on how to regard spent fuel. However, it is possible to have a consensus on different elements of a strategy and on the basic principles underlying it.

It is recognised that uranium is a limited resource in the world and should not be wasted; recycle should be encouraged where feasible. At this time, it might be useful to have a global overview on uranium – estimates of available resources compared to likely demand and options for its further use. This is a topic that might be considered by the international organizations.

The fourth question was: How would the international instruments be used in the event of multilateral arrangements being adopted for spent fuel management?

The most relevant international instrument in this context is the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (the Joint Convention). There was agreement about the benefits of the Joint Convention; the process of exchange of information between countries promotes confidence and belief in other countries. The Joint Convention was intended to facilitate interactions between individual countries and has no mechanism for multilateral arrangements; on the other hand it does not exclude them and has already provided a forum for discussions on the subject. A multilateral facility would have to be located on the territory of a country and it seems clear that the facility would have to operate within the regulatory requirements of that country with consequent implications to any other countries wishing to place material within the facility.

It was noted that public confidence has been enhanced by the Joint Convention but also by international peer reviews and regulatory review teams. Together they provide evidence that countries are meeting their international safety obligations. The international organizations are encouraged to continue and, if possible, to increase these types of activity.