

Never Safe Enough

The USA's Richard Meserve — one of the world's top advisors on nuclear plant safety — looks at the record...and steps toward improvement. He spoke with IAEA Bulletin Editor Giovanni Verlini on a range of issues.



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Q: As head of a global body on nuclear safety that advises the IAEA's Director General, nuclear community and the

public, what issues concern you at a time when many see a potential for a burgeoning 'nuclear renaissance'?

RM: This is a time when there is enormous interest in new nuclear construction all over the world. I believe this reflects the fact that safety performance of nuclear power plants is generally good, though there are issues of concern of course. First and, to my mind, foremost is the continuing obligation to avoid complacency. Even sophisticated operators who think they are doing fine can get themselves into trouble. Constant vigilance and constant efforts to improve are essential. The second issue is the challenge presented by ageing reactors. Many reactors have been operating for several decades now, and indications are that they will keep operating.

But there could be maintenance and safety issues associated with that choice. The third issue is the challenge presented by new entrants. A variety of countries that do not have nuclear power plants are talking of entering the nuclear field. I believe it is a challenge for everyone to make sure that these countries realise the responsibilities associated with taking on nuclear technology and that they can fulfil them.

Q: What is the likelihood that these nuclear ambitions will be realized?

RM: Some of the countries currently talking about developing nuclear capacity may not go ahead. But if they do, it is important that they do it with an awareness of what it takes to ensure nuclear safety. I think that the IAEA's safety standards are a very important benchmark. They are crucial for new entrants, in that they do provide these countries with a set of rules and knowledge that they would

not have otherwise. In the future, these standards will become even more crucial as we move towards advanced reactors.

Q: Chernobyl's effects are still being debated and nuclear plant incidents elsewhere — Japan, Germany, Sweden, the USA — get high media attention and worry the public. Are these worries warranted in your view?

RM: It is a fact nuclear incidents quite often have a human element involved one way or another — mistakes were made, the right procedure was not followed, or maintenance was not done properly. That worries people. Yet if one looks at the objective data from across the globe, safety levels have improved on average. The operators are getting better, learning from their own experience and from each other. That is not to say, however, that constant vigilance is not necessary. It is vital, and so is being completely forthright with people — if a problem arises, be prepared to reveal the facts honestly. People can sort things out.

Q: We often hear about creating a nuclear 'safety culture'. What is it?

RM: It's basically an awareness from top management on down that there are special responsibilities for nuclear technology, and the way to confront them is make sure that everyone understands the importance of safety and the ways to ensure it. An important aspect is that employees understand that if they see a problem they have a responsibility to see it addressed. If their immediate supervisor is not listening to them, then they need to go over the supervisor's head to others and make sure that the problem is resolved — and the management should reward those people.

Q: You were Chairman of the US Nuclear Regulatory Commission (NRC) when terrorists attacked on 9/11. How has that event influenced your views when it comes to nuclear safety and security in the USA, and in other countries around the world?

RM: Before 9/11, the NRC had a rather aggressive programme to make sure that nuclear power plants were ade-

quately protected. But as we all know the world changed with 9/11. At the NRC, I oversaw a 'top to bottom' re-evaluation of safety and security. Since then, measures have been greatly strengthened, in the USA and elsewhere. We learned, and it's important to understand, that safety and security are linked to each other. One big challenge is to reinforce this recognition and drive it home in the nuclear community so that the right balance can be achieved and maintained.

Q: Given the prospect of transboundary consequences if there is another serious accident, do you see nuclear power being regulated globally someday?

RM: I do not think it is very likely that nuclear power will be regulated globally, at least not in the foreseeable future. Issues such as energy policy and public health are so central to a country's life and politics that national governments will want to retain control over them.

However, I believe an international network of relationships fostered by organisations like the IAEA can assist countries and ensure that transboundary effects are dealt with quickly and accurately. Today, there's a good foundation to build upon — a global framework of safety standards and international conventions, coupled with the international reporting and emergency response systems. They help countries share and learn from experience, and serve to keep the public informed.

Q: Final thoughts: from your vantage point, what's the bottom line? Are the world's nuclear plants safe enough?

RM: When you look at the record, I think they are. But there's much more to be done, especially as we've talked about, new players enter the nuclear scene and ageing plants are kept running longer. As our advisory letters to IAEA Director General ElBaradei emphasize, there's no room for complacency. Our attitude should be 'never safe enough'.

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