

and the United States. The handbook contains reactor physics benchmark specifications that have been derived from experiments that were performed at various nuclear experimental facilities around the world. The benchmark specifications are intended for use by reactor physics personnel to validate calculation techniques.

The 2007 edition of the International Handbook of Evaluated Reactor Physics Experiments spans

over 15 000 pages and contains data from 21 experimental series performed at 13 reactor facilities. The handbook is organised in a manner that allows easy inclusion of additional evaluations, as they become available. Further evaluations are in progress and will be added to the handbook annually.

Further information can be found at www.nea.fr/html/dbprog/IRPhE-latest.htm and <http://irpheap.inl.gov>. ■

Legislative update: United States

The US Senate consented to the ratification of the Convention on Supplementary Compensation for Nuclear Damage (CSC) on 4 August 2006. Both the House of Representatives and the Senate are now in the process of drafting legislation to implement the CSC before the State Department will deposit the necessary instrument of US ratification with the International Atomic Energy Agency. The US is optimistic that its ratification of this “new” Convention, adopted in 1997 under the auspices of the IAEA in Vienna, will lead to its entry into force within a short time frame. The Convention provides for its entry into force on the 90th day following the date on which at least five states with a minimum total of 400 000 units of installed nuclear capacity¹ have deposited an instrument of ratification, acceptance, approval or accession. At the time of writing, three countries (Argentina, Morocco and Romania) with a combined nuclear power generating capacity of approximately 1 586 MWe² (or 4 750 MWth) have ratified the CSC. After US ratification, it will therefore be necessary for one or more states with a capacity of approximately 100 000 MWth to ratify this instrument for it to enter into force.

The entry into force of the Convention on Supplementary Compensation will substantially change the face of the international nuclear liability regime. Up until now, there have been two regimes existing in parallel: the Paris/Brussels Convention regime and the Vienna Convention regime. These systems are linked to each other through a “bridge” convention – the Joint Protocol – which provides for the extension of the benefits of one regime to victims in countries party to the other regime, under certain conditions. The CSC is a free-standing instrument, open to all states. This means that countries can become party to a new global regime providing for liability and compensation for victims of a nuclear incident,

without also having to become a contracting party to the Paris Convention or the Vienna Convention. This is certainly a major step forward given that at the present time, over half of the world’s reactors in operation or under construction are not covered by any of the international nuclear third party liability conventions.

It is important to point out that the CSC will be of interest not only to states that do not currently participate in any of the nuclear liability conventions, but also to Paris and Vienna Convention states. Efforts to link Paris states and Vienna states through the Joint Protocol and to create a global regime through the CSC are compatible since a Paris state or a Vienna state can be a party to both the Joint Protocol and the Convention on Supplementary Compensation.

So what will the CSC actually do? The CSC creates an instrument by which states can ensure that more money will be made available to compensate more victims for a broader range of damage than ever before. A global nuclear liability regime, in order to be efficient, needs to be “attractive” both to nuclear-power-generating states and non-nuclear-power-generating states. The CSC was designed to do just that, by focusing on providing legal certainty with regard to the treatment of legal liability for nuclear damage resulting from a nuclear incident, and ensuring, in the unlikely event of a nuclear incident, the prompt availability of meaningful compensation with a minimum of litigation and other burdens.

The CSC achieves legal certainty by requiring each contracting party to have national nuclear liability law that is based on the Paris Convention, the Vienna Convention or the Annex to the CSC, and that incorporates the provisions contained in the CSC on jurisdiction, compensation and the

definition of nuclear damage. This means that the national law of each participating state will reflect the basic principles of nuclear liability law which include a) legal channelling of all liability for nuclear damage exclusively to the nuclear operator; b) strict liability of the operator with very limited exonerations; c) exclusive jurisdiction of the courts in the country where a nuclear incident occurs; d) permitting liability to be limited in amount and time; and e) no discrimination based on nationality, domicile or residence. Special provisions were introduced into the CSC to ensure that the US, which has a legal system³ providing for “economic” rather than “legal” channelling of liability, is able to participate in the regime.⁴

The CSC provides for two tiers of compensation. The first tier, fixed at 300 million Special Drawing Rights,⁵ is to be provided by the liable operator. If the operator’s funds are insufficient, the Installation State (contracting party in whose territory the installation of the liable operator is located) is required to cover the difference. This tier is to be distributed on a non-discriminatory basis to victims both inside and outside of the Installation State. If 300 million SDRs are insufficient to compensate all damage, then contracting parties will be required to contribute to the second tier (the international fund). The amount of this second tier is not fixed, but rather will depend on the number of operating nuclear power plants in contracting parties, and is designed to increase as the number of such plants increases. A contribution formula is established pursuant to which more than 90% of the contributions come from nuclear-power-generating countries on the basis of their installed nuclear capacity, while the remaining portion comes from all contracting parties on the basis of their United Nations rate of assessment. Half of this international fund is to be allocated to victims both in the Installation State and outside the Installation State (transboundary damage), and the other half is allotted exclusively to cover any transboundary damage not already compensated under the first tier. This represents an important incentive to non-nuclear-power-generating countries to join the CSC.

The scope of application of the Convention is determined by reference to the two different compensation tiers. As regards the first tier, the law of the Installation State determines to what extent damage suffered in non-contracting parties will be covered. With regard to the second (international) tier, the Convention provides that funds may not be used to compensate damage suffered in non-contracting parties. This restriction is in keeping with the philosophy that a fund comprising “public” money should be distributed only to victims in states which contribute to that fund.

The Convention does not require its contracting parties to set aside funds in advance in order to compensate damage which may exceed the first tier, in the event of a future incident. Rather, they will be required to make the additional funds available, after a nuclear incident occurs, to the country whose courts have jurisdiction, and then only if and to the extent that those funds are required.

The CSC provides that its contracting parties shall adopt a broad definition of nuclear damage, covering not only personal injury and property damage but also certain categories of damage relating to impairment of the environment, preventive measures and economic loss “to the extent determined by the law of the competent court”.

The Convention on Supplementary Compensation further recognises concerns of coastal states with regard to maritime shipments of nuclear material. It provides the courts of a contracting party with exclusive jurisdiction over nuclear incidents occurring within its exclusive economic zone (EEZ). The CSC makes it clear that this rule is intended simply to determine which country’s courts have jurisdiction to adjudicate claims for nuclear damage resulting from a nuclear incident, and it does not permit any exercise of jurisdiction that may be contrary to the Law of the Sea.

This instrument is a welcome addition to the international nuclear third party liability conventions already in operation, and it is hoped that other countries will also ratify the Convention soon, thereby ensuring its entry into force in the near future. ■

Notes

1. 1 unit is defined as 1 MW of thermal power, i.e. 1 MWth.
2. Figures taken from the IAEA Power Reactor Information Service (PRIS) as of 4 May 2007.
3. The US national law is the Price-Anderson Act, which is section 170 of the Atomic Energy Act of 1954. The Price-Anderson Act was adopted in 1957 and currently provides the basis for liability and indemnification arrangements governing all NPPs in the United States.
4. The primary difference between US national law and the provisions of the Paris and Vienna Conventions relates to how responsibility for nuclear damage is channelled exclusively to the nuclear operator. Both the Vienna and Paris Conventions provide for legal channelling pursuant to which an operator is the only person legally liable for nuclear damage. US law provides for economic channelling under which the operator bears all the economic consequences for nuclear damage, even if other persons might be legally liable. Persons other than the liable nuclear operator can be indemnified if they incur costs because of legal liability.
5. This corresponds to approximately 454 M USD or 336 M EUR.