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June 2000

ISOE INFORMATION SHEET
CONCLUSIONS AND RECOMMENDATIONS
FROM THE 2nd EC/ISOE WORKSHOP ON
OCCUPATIONAL EXPOSURE MANAGEMENT
AT NPPs

ISOE European Technical Centre - CEPN Information Sheet No. 25

The European Technical Centre co-organised with the European Commission the second EC/ISOE Workshop on Occupational Exposure at Nuclear Power Plants in April 2000, in Tarragona, Spain. 160 participants from 23 countries, mainly European but also from America and Asia, attended the Workshop. The IAEA supported participants from Central and Eastern European countries as well as from China, Korea and Pakistan. Two thirds of the participants were senior health physicists from Nuclear Power Plants (NPPs) and Nuclear Research Centres, the last third was equally composed of representatives of national regulatory bodies and contractors. This workshop allowed 32 oral presentations and 15 posters presentations to be provided, in addition 8 vendors presented their products in booths. One of the most appreciated item, by all participants, was the half-day spent in small groups' discussions. The success of this Workshop is largely due to the important organisational support from the Vandellos 2 and Asco utility and ENRESA (the Spanish body in charge of dismantling installations). The translation from French, German and Spanish to English, which has been financially supported by Framatome (the French Vendor), has allowed a wide participation from radiological protection professionals from the plants.

The impact of deregulation and free market on radiological protection of the workers has been addressed both during the introductory session (by the Spanish and Swedish regulatory bodies) and within all small group discussions. All participants confirmed that, up to now, deregulation has not had any negative impact on the protection of workers; however some pointed out that this was a new and quite difficult challenge for the industry. A French presentation from the utility described a new type of contractual relationships between a plant and group of contractors' firms allowing these last to pool

resources in the areas of Nuclear Safety and Radiological Protection. As a conclusion it was recommended:

“To consider new "Radiation Protection" management techniques to avoid the potential negative impacts of deregulation on exposures, while keeping radiation protection independent from operation and maintenance of the plant”.

A topical session concerned the evolution of radiological protection for the dismantling of installations. After a recall of the main conclusions from the first European ALARA Network (EAN) Workshop on that topic (Saclay 1997), several experiences from Spain, France, Germany and the United Kingdom were presented. Most of them focussed on procedures and techniques set up to manage risks. One major conclusion was that **“there is a need to improve feedback in decommissioning both on operations performed and on incidents that have occurred”**. The ISOE system was then considered as a potential support to facilitate this improvement. Another recommendation from the EAN workshop has been endorsed by the participants:

“To adopt a uniform system of control in (and outside) Europe to demonstrate that an acceptable level of risk has been achieved when material arising from decommissioning are cleared”

The implementation of ALARA during large tasks has been addressed by some Chinese, Dutch and Swiss lectures. Generally speaking this second EC/ISOE international Workshop was mainly devoted to feedback experience from the plants and lessons learned on ALARA implementation and occupational exposure issues. The reduction of dose rates through Zinc injection has been demonstrated, even if improvements have still to be expected, both for PWR and BWR through German and Swedish experiences. The Swedish paper from Barsebäck has been awarded.

During the discussions and the lectures a need for harmonisation has been pointed out both in terms of practices (decontamination of personnel clothing's, foreign workers management...) and in regulations (release criteria)

The workshop participants also recommended:

“To maintain in the system of radiological protection the concept of collective dose which is a very useful management tool, both efficient as a performance indicator, as well as indispensable as an optimisation tool”

However there was an agreement that the use of the collective dose has to be complemented by the use of other indicators such as:

- the individual dose distribution,
- the number of exposed man-hours,
- and, as suggested by a Spanish lecture, some ratios such as the daily collective dose during an outage divided by the exposed man-hours.

Finally the Workshop has been a good opportunity to reinforce the links with overseas health physicists when listening to the awarded papers from the 1999 ISOE international symposium of Orlando (United States of America). Moreover three presentations have been awarded at Tarragona and are invited to

make their presentation in 2001 at the ISOE international ALARA symposium in the United States of America. In addition to the Barsebäck paper, the other two are one from Sizewell (UK) concerning “health physics problems of power operation with failed fuel” and another one from Framatome (France) concerning the management of foreign workers in different countries.

The next ISOE European Workshop will take place in 2002 in Slovenia.