

IAEA ACTIVITIES IN NUCLEAR POWER PLANT PERSONNEL TRAINING AND QUALIFICATION

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Training to achieve and maintain the qualifications and competence of nuclear power personnel is essential for safe and economic nuclear power. It is widely and increasingly recognized that training is the primary way to attain professionalism and competence in performance.

This Technical Cooperation Meeting on Training-Related Activities for Nuclear Power Plant (NPP) Personnel in the countries of Central and Eastern Europe (CEEC) and of the former Soviet Union (FSU) has as its main objective the identification, through information exchange and discussion, of possible Technical Cooperation (TC) projects to assist Member States in meeting NPP personnel training needs and priorities, including the enhancing of training capabilities. This TC assistance should meet overall national goals and have a significant impact on and relevance for national priorities. Such projects could be on the national or regional level.

In identifying possible topics for Agency assistance and technical cooperation, it is important to know how a specific request or project proposal fits into the overall national programme, in this case training to achieve the qualification and competence of NPP personnel. It is also necessary to know what commitments and input a country would be prepared to provide in terms of human, financial and other resources committed to a project.

An IAEA Review Meeting on Training for the Qualification and Competence of Nuclear Power Plant Personnel was held in Vienna in February 1993. This meeting has provided a solid basis for going forward with Agency activities in this area, including technical cooperation. The main results and recommendations of the Review Meeting may be summarized as follows:

- **A systematic approach to training (SAT), as presented in the IAEA Guidebook on Training to Establish the Qualification and Competence of Nuclear Power Plant Personnel (IAEA TECDOC-525), is essential for achieving, maintaining and assessing the qualification and competence of NPP personnel. All Agency guidance (assistance, documents) on NPP personnel training should reflect this approach.**

- TECDOC-525 should be updated to take into account recent experience in NPP personnel training, such as more emphasis on the evaluation of training and on the importance of human performance skills.
- **SAT is a management tool** for achieving quality in training and personnel performance, and thus for safety and quality culture.
- Plant management should have a greater awareness of its role and responsibilities for implementing a safety and quality culture through training to achieve NPP personnel competence, and of the importance of SAT in this regard.
- **Training Advisory Missions** should be available to Member States, on request, to support and assist a better understanding of the importance of SAT and an effective implementation of SAT (design, development, implementation and evaluation of training).
- **An International Working Group on Nuclear Power Plant Personnel Training and Qualification (IWG)** should be created. This IWG would promote the application of a broad, integrated SAT for the training of all NPP personnel, including plant management, which bears the responsibility for critical aspects of training and for the competence of NPP personnel. The IWG will seek to promote international best practices in NPP personnel training, through information exchange, coordination of studies and reviews, promoting relevant IAEA standards and guidelines and identification of important issues to be addressed.

The Agency has initiated various activities to implement the main recommendations of the Review Meeting. In this connection, the first meeting of the IWG will be held at the IAEA, Vienna in April 1993; and the updating of TECDOC-525 is to start at the beginning of 1994.

Some points should be highlighted. Plant and line management have the responsibility for approval of the training programme to establish competence. **The full benefit of SAT can be obtained only if it is implemented comprehensively and consistently.** This requires commitment at all levels of the plant organization and the allocation of adequate resources.

SAT is not to be identified with job and task analysis (JTA). SAT is far more than this, and elaborate JTA should not become a barrier to introducing SAT. SAT will utilize most if not all of the existing training capabilities. Both SAT and JTA can and should be adapted to local needs and conditions.

Evaluation is an extremely important aspect of the systematic approach to training. Evaluation during all phases of the training process and regular feedback into this process. Feedback from plant changes and human-factor-related root causes of events--on a worldwide basis--must be incorporated into training programmes.

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While the ways and means to achieve the competence and qualification of NPP personnel operations, maintenance, management, technical support personnel may vary depending on the needs/conditions of a country or plant, the final level of qualification and competence to perform a given job must be the same; regardless of country or NPP.

I should also like to emphasize the importance of coordination among donor organizations and countries, and among donor and recipient countries. This meeting is an effort to demonstrate how a positive synergy can result from such coordination. Coordination, cooperation and appropriate expert representation are necessary to ensure that the funds and other assistance being provided to recipient countries are used most efficiently and effectively, and to avoid redundancies and gaps. Internal coordination of assistance projects within a country is also essential, for the same reasons. This is in the interest not only of the donor organizations and countries but also of the recipient countries.

There has to be accountability associated with assistance. Projects must be identified, designed and developed very carefully with evaluation built into the project from the beginning, with clearly defined objectives and performance indicators to permit meaningful and regular evaluation during the project and at the end of the project--a systematic approach for assistance. This permits effective and efficient determination of whether or not the assistance/project has had the intended/desired impact.

Better mechanisms need to be found for the coordination, collection, dissemination and utilization of information. Here I would emphasize the distinction between passive information, something that is sitting in a database and may or may not be looked at, updated or used, and active information which is used, updated and disseminated, and thus becomes a very important resource. There is a wide range of valuable information gained from experience in implementing projects and assistance, which can be exchanged between recipient countries as well as between donor and recipient countries while honoring any proprietary restrictions.

Systematic Approach to Training

