

# PROGRAMMES DESIGN FOR BOHUNICE NPP PERSONNEL OTHER THAN CONTROL ROOM OPERATORS

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**Abstract.** This paper deals with project development of training programmes for non - licenced NPP personnel - masters, field operators, maintenance and technical supporting personnel. The programme development focuses on the part stage and on the job training at NPP. Bohunice NPP belongs to plants with higher specific number of personnel per installed power capacity. This factor also influenced the choice of programmes design. Undermentioned procedure is one of various approaches to SAT exploitation for training programmes design.

## 1. Introduction

Renovation and systematic development programmes for non licensed personnel were influenced by the following factors:

- (a) Slovak national standards, regulatory bodies' regulations and IAEA recommendations
- (b) organization chart NPP Bohunice that is corresponding to relatively complicated NPP's flowsheet and to large deal of maintenance and repair services that are carried out by our specialists
- (c) previous experience with programs design at Bohunice and other NPPs
- (d) recommendations and skills of other organizations with program design and their up-keeping.

## 2. Description of the procedure

### 2.1 *Exploitation of previous experience in the branch of training programmes development at Bohunice NPP*

Essential experience gained from the past has provided information about relatively short life cycle of programmes if these aren't permanently updated. Most programmes created in 1998 are not applicable nowadays, which is caused by three groups of reasons:

- the first are connected to changes of technology equipment and application of new generation of operation procedures, development of beyond accident procedures, implementation emergency mode settlement procedures
- the second group of reasons is connected to organization chart changes-organization hinting (slenderising), service outsourcing, control centralisation
- the third group are reasons of negotiations and harmonization processes - EU process and synchronization of national EN and ISO standards (environmental, non destructive testing and so on).

Next experience is the need to set the complexity of the programmes and learning texts very carefully. The components of systems are innovated, changed and modernized, control systems are improved and, as a consequence, the programmes and texts, even though they are well composed, are expired.

### 2.2 *Selection of Analysis Techniques*

NPP Personnel training is divided into basic and periodical; basic training is divided in theoretical, stage, simulator, exam and on the job training. For Bohunice NPP the theoretical and simulator training is provided by an external organisation. Stage and on the job training are carried out at the site of NPP and the NPP must ensure programmes for this part of the training. Because it is not possible to elaborate analysis for stage and on the job training separately, we had to work out whole analysis for a particular job. Taking into consideration the number and character of the jobs, we applied Table Top Job Analyse [TTJA] and Table Top Job Design [TTJD].

### **2.3 NPP management discussion and approval of approach and programmes development schedule. Arrangement and training of work teams**

Training department submitted material for NPP management discussion that contained methodology of design programmes, the structure and training of work teams, programmes design schedule, expenses for programme development and proposal for provision for executors. After management accepted this material the programme was implemented. Time period from NPP management's approval of the material till it was submitted to the regulatory body was one year approximately.

The work teams included:

- skilled and experienced employee who performs the task
- his manager
- coordinator from the department which is in charge of the job
- coordinator-facilitator, SAT specialist from training department.

NPP management appointed a coordination team for inspection. Coordinators and facilitators were being trained for the SAT methodology separately and then participated in preparation courses for job performers and their managers again.

The training was organised in two parts.

The first part took four days and consisted of four blocks

- introduction, schedule and procedures used
- explanation of basic terminology [task, competence, knowledge, skills, attitude, scope],
- Table Top Job Analyse and Table Top Job Design and
- abc teamwork with discussion about following roles and next actions to be taken.

The second part took one day. It was organised after the following was listed: job needs, competencies, operating areas assignment and competencies arrangement into operating areas with the next steps programmes design. Both design coordinators and facilitators cooperated at the programmes design.

### **3. The most important experiences obtained in the course of programme design**

The first basic assumption for the programmes design was to convince

- NPP management about the need of programmes design
- coordinators and facilitators about their very important role during programmes design
- managers and job workers that the programmes are useful for them
- everyone that the work will be appreciated and to observe this promise

Next important experience was creating a form for programmes design, with step by step advancement. Technicians require such a form and it is very useful when explaining the programmes design or when a part of the programme is interpreted in a different way.

### **4. Measures for Programme Maintenance**

Programme maintenance is as important as its creation. To fulfil this task, we have implemented the following measures:

- (a) we incorporated the programmes into quality assurance system (as instructions)
- (b) in cooperation with managers we will appoint the programme administrator for the electronic form of the programmes. Once in 3 years the programmes will be printed. The programme administrator will hand out the updated programme to instructors and the trainee before the new hire training.

### **5. Conclusion**

We suppose that other NPPs with higher specific number of personnel per installed capacity have similar problems. We would like to exchange the experiences with programmes design and maintenance.

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