

Sixth International Information Exchange Forum
on
“Safety Analysis for Nuclear Power Plants of VVER and RBMK Types”
(FORUM-6)

PEER REVIEW OF UKRAINIAN NPP PROBABILISTIC RISK
ASSESSMENT PROJECTS

(Presented by “Engineering Technologies & Developments”, Kiev, Ukraine)

1. The main objective of presentation:

The main objective of the presentation is to familiarize the audience with the ET&D’s activity related to independent external review of the PRA part of the following Ukrainian ISA projects: South Ukrainian-1 ISA, Zaporizhzhya-5 ISA, and Rivne-1 ISA. An emphasis would be done on technical aspects of the review process, including review method and some basic sets of evaluation criteria.

2. Scope of the presentation:

The presentation would consist of the following main sections:

- A brief historical background (ET&D company and it’s role in the US DOE ISA projects in Ukraine);
- ET&D’s methods and approaches applied while reviewing the PRA parts of the ISA projects;
- General overview (i.e. not referring to a specific ISA project) of some review findings along with some suggestions aimed to improve the ISA PRA products (this would include also some areas where further international cooperation is needed, e.g. modeling of ATWS sequences, reactor re-criticality, PTS, some secondary effects, imposed by some special initiators, etc.).

General overview of the ISA PRA review would encompass with virtually all the main PRA elements:

- System description
- Component Reliability Database
- Abnormal Events & Incidents Database
- AS analysis – ET modeling
- Success Criteria
- System analysis – FT modeling
- Human reliability analysis
- AS quantification. Importance, Uncertainty and Sensitivity Analysis.

The presentation would not last more than 30 min (not taking into account the time to be spent by the interpreter).