

Creating of requirements  
for control of postaccident situations at NPP

V. S. Dickarev, V. S. Ionov

INP RRC KI Moscow, Russia

Requirements of legal documents to control of postaccidents situations based at existing nuclear safety requirements and assumed for monitoring of situation and control of postaccident actions using of normal operation equipment and safety systems, supposed by design of NPP. That means are corresponded to requirements for design accidents and unnormed accidents, when violated limits and conditions for design accidents.

Presents main topics and problems which arise during creating of regulatory requirements for post accident situations at NPP, for example:

- 1) classification of plant conditions by consequence severity, possibility of sequences events and prevent of them, and possibility of return to normal operation or decommission;
- 2) determine of safety functions for conditions which not included existing requirements. The acceptance of the new safety functions allow prepare requirements to post accident monitoring, control situations and technical means for mitigation of accidents;
- 3) determine of requirements and criteria to using nonplant means for postaccident conditions, in particular to connection with damaged unit of plant and quality of safety function executions. That requirements allow to solve problem extreme requirements to safety systems and retard "safety system race";
- 4) classification of severe accidents by
  - obviously symptoms of situation severity and of severe accidents for depository too;
  - normal operation equipment and safety system conditions (degree of possibility supply safety functions);
  - state and localization of radioactive materialsand so on.

This should help to prepare of severe accident list for addressing to design.

- 5) creating system analysis concept to postaccident situations for monitoring and controlling systems of facilities, preparing general for NPP principles of monitoring and requirements, and regiment requirements for analysis, monitoring and reduce of accident consequences of particular facility.