

Tritium Uptake Incident

On June 23, 2012 while RAPS-5 was under planned bi-ennial shutdown, an incident of tritium uptake of above Investigation Level (4 M Bq/l) took place. Tritium is a soft beta emitter and once it enters body, its removal starts (a natural process) and reduces appreciably within a week. The Investigation Level in respect of Tritium uptake is defined conservatively at about 1/10th of the authorized annual limit specified by the regulatory body.

The incident occurred when a modification work, as planned during the shutdown, for assuring a provision of alternate water addition to the moderator system in the reactor -5 was being carried out. The uptake occurred due to inadvertent rise in tritium levels in a localized area of the containment building of the reactor -5. The localized increase in the Tritium concentration occurred due to the opening of the moderator cover gas line where the welding jobs were to be performed. There was no abnormal release of radioactivity to the environment.

All the persons involved in the work were monitored as a regular practice. Two persons are likely to exceed the annual exposure limits specified by the regulatory body. The exposure of other persons is below the annual exposure limit specified. They have been assigned the work in non-radioactive areas as per the prevailing procedure applicable in such cases. The incident was reported to AERB. The incident has been investigated by the committee deputed by NPCIL and by AERB independently. The appropriate measures as suggested by these committees to prevent such incidents in future, will be implemented promptly.