

August 1, 2011

**A Clarification: "Brief on exposure of contract workers at KAPS Unit-2 on May 30, 2011"**

Certain section of Press and Electronic Media is giving a coverage regarding exposure of four workers at Kakrapar Atomic Power Station which took place on May 30, 2011.

It is clarified that this incident is two months old and the same was placed promptly at NPCIL website under 'KAKRAPAR ATOMIC POWER STATION - OPERATING EXPERIENCE' in public domain. The incident was also placed by Atomic Energy Regulatory Board around the same time and has also been reported to International Atomic Energy Agency (IAEA) as per prevailing procedure. However, the details in this regard are once again attached for your information please.

**"Brief on exposure of contract workers at KAPS Unit-2 on May 30, 2011"**

Kakrapar Atomic Power Station (KAPS 1&2) comprises of two units of 220 MW Pressurised Heavy Water Reactors (PHWRs). These reactors are operating at full power using imported fuel, since their placement in IAEA safeguards in December 2010. The re-fuelling in these reactors is carried out on power on daily basis using remotely operated fuelling machines. The spent fuel bundles discharged from the reactor are transferred to Spent Fuel Storage Bay (SFSB) through the Spent Fuel Transfer Duct (SFTD). The radiation field in the SFTD area increases during transfer of spent fuel bundles through SFTD.

On May 30, 2011, KAPS-2 was operating normal. Painting work in spent fuel transport duct (SFTD) was in progress as planned. Seven contract workers were deployed to carry out this work. They were trained in radiation aspects prior to taking up the work. Other operations in this area were kept on hold. However, inadvertently a fuel discharge operation was initiated resulting in

increased radiation field in the SFTD area which led to radiation exposure of four workers. The fuel discharge operations and the painting work were immediately suspended and the workers were removed from any further activity involving radiation.

It is brought out that the regulatory limit for radiation exposure for occupational workers is 20 milli-Sieverts (mSv) in a year. In line with the principle of 'As Low As Reasonably Achievable' (ALARA), the radiation exposure limit for contractor workers is kept at 15 mSv in a year. An exposure of 100 mSv is permissible as per regulatory stipulation under emergency situations. The detectable health effects are observed beyond 500 mSv of radiation dose. The radiation dose that can cause death is 3000 mSv and above.

The exposures to the four workers were recorded in the range of 23.23 mSv to 90.77 mSv. The level of exposure of the four workers is significantly lower than that which can cause adverse health effects. However, the comprehensive medical check up of these workers has been carried out and no adverse effect has been detected. The workers are continuing to perform their normal duties, albeit in other areas of the station.

The incident was promptly reported to the Atomic Energy Regulatory Board (AERB), who carried out a detailed review and reported to the International Atomic Energy Agency (IAEA) as per the prevailing procedure. The incident details were also posted on NPCIL website ([www.npcil.nic.in](http://www.npcil.nic.in)) in public domain.

The incident has been reviewed and necessary improvements have been effected in the systems and procedures to ensure that such an incident is not repeated.