

## QUESTIONS POSED BY JOURNALISTS AND THEIR ANSWERS

### **1) How can AERB help promote the right use of radiation in commercial use?**

AERB doesn't promote nuclear energy or the use of radiation sources and facilities for commercial use. AERB oversees the safety in use of radiation sources and facilities and nuclear energy for peaceful purposes such as power generation, medical, industrial and research applications. AERB exercises regulatory control by licensing and regulatory supervision. AERB also develops regulations.

### **2) Please elaborate the provisions of penal actions in case of violation of regulatory provisions is observed? In short we would like to know about the teeth and claws of the lion called AERB.**

AERB takes enforcement actions for non-compliances to regulatory requirements. The enforcement actions taken are concomitant to the non-compliance. In the past, AERB has taken actions such as Warning the institution, withdrawal of license and shutting down of the facility, depending on the seriousness of the non-compliance. The details of enforcement actions and the reasons for having to take these actions are available in AERB annual reports.

### **3) AERB has been pulled by Indian court on storage facilities by nuclear plant. What is the process AERB undertaken in the storage capacity building space? How prepared is AERB to regulate the storage of depleted/ spent nuclear fuel?**

AERB is not involved in the storage capacity building space for Spent Nuclear Fuel (SNF). There are well defined safety requirements spelt in AERB regulatory documents in the form of Codes and Guides for ensuring safety of SNF. AERB ensures safe storage of SNF during its residence period in spent fuel storage facilities, both at-reactor and Away From Reactor (AFR) / Fuel storage facilities. AERB carries out regulatory inspections of facilities periodically. Details can be found in AERB Annual Report.

### **4) How often unusual incidents get reported? What are the unusual incidents that happen?**

AERB has a firm reporting requirement to the licensees to report any unusual incident that happens in the facility. The unusual incidents which are expected to occur over a period

of operation are usually managed by the licensee itself. AERB annual report gives details of unusual occurrences that have taken place.

**5) Reports of violation of regulatory measures has been observed of the mining and milling facilities of nuclear fuel in India. What specific measures AERB has taken in this regard?**

AERB regulates the uranium/thorium mines and mills from radiation safety standpoint. AERB has made recommendations from time to time to ensure regulatory compliance during the periodic regulatory inspections of the facilities. AERB also receives independent reports of radiation survey carried out by BARC units stationed at the mining and milling sites. The radiation dose received by the workers and by nearby population, as estimated from the environmental discharges, is found to be well within limits specified by AERB.

**6) Country is waiting for the Jaitapur project since long time and there is lot of issues with this project. But major issue is about awareness. Any effort initiated to create awareness among people in Jaitapur?**

When the nuclear power plant is being set up at a site, DAE/NPCIL carries out extensive awareness activities. Recently, AERB has also started awareness programs near the vicinity of different nuclear power plants to apprise local population of the regulatory framework. AERB plans to continue with this initiative in future also.

**7) What type of efforts are done to educate people who are opposing nuclear power?**

As mentioned earlier, AERB neither promotes/ encourages nor discourages the use of nuclear energy. AERB tries to create awareness on the safety and regulatory aspects and to put things in correct perspective. To this extent, AERB has carried out specific awareness programs for residents near Nuclear power plants. AERB is also carrying out public awareness program through organising webinars in social media platforms, awareness videos, displaying exhibition stalls in various events etc. AERB website has information materials on safety of nuclear power plants.

**8) What precautionary measures are taken for regularly regulating and monitoring medical equipment to reduce, prevent and arrest radiation hazard?**

Before operating the medical equipment, AERB ensures that appropriate design safety considerations are in place, through a process called "Type approval". The licensee is required to report to AERB, as part of the licensing conditions details of the equipment's periodic quality assurance test reports. The detailed records of performance of the

equipment are also verified during Regulatory Inspections. This will ensure continued safe use of the medical equipment.

- 9) How AERB controls and monitors mobile towers and cell phone radiation. There is lot of fear with respect to 5G. Telephone and network towers are installed in populated areas. Is there any danger to humans living nearby due to radiation?**

Mandate of AERB is regulation of sources generating ionising radiation such as alpha, beta, gamma, neutron, etc. As radiation from mobile towers is non-ionising in nature and regulation of the same is beyond the jurisdictional purview of AERB.

- 10) Does AERB work/ collaborates with defence services of Navy?**

AERB regulates only civilian use of Nuclear and radiation facilities. However, following a request from Navy, AERB has been conducting awareness programs to naval officers since two years on regulatory framework, safety performance indicators, inspection methodology etc.

- 11) Wide gap between risk and benefits in daily life. Kindly throw some light on Risk – benefit ratio.**

Every aspect in life has benefit and risk associated with it. An understanding of risk vis-à-vis benefit is a comparison between the risks of a situation and its benefits. It's used to figure out whether a course of action is worth taking or if the risks are too high. The first fundamental principle of radiation protection is justification which means that a practice is justified only if the benefit from it outweighs the associated radiation risk. Only justified practices are allowed to function and AERB issues licences to those justified practices after due verification of the radiations safety status.

**12) What specific measures are initiated to address about the nuclear radiation and its ill effects for humans?**

AERB sets limits of occupational radiation exposure and radiological discharges to environment to ensure that workers and public are not exposed to the ill effects of radiation. All regulatory actions such as safety review, licensing and periodic regulatory inspections are undertaken to ensure that the nuclear facilities operate within the limits and conditions specified by AERB.

**13) There are so many misconceptions about nuclear energy/ radiation. So what can us as journalists do to spread some awareness? What do you expect?**

The present workshop for journalists is a step in this direction. In case of doubt, AERB would like the journalists to verify facts with AERB or other DAE units before putting up any news item, which could spread the misconceptions among public.

**14) It is believed that cancer rates are high for the working population in nuclear power plants. What is your opinion on this?**

The Tata Memorial Hospital, which is a specialist cancer treatment and research centre, has conducted an extensive study on the NPP workers in the country. It has concluded that the cancer rates for workers of NPPs are not different from the baseline cancer rates in the country.

**15) How do you handle radioactive waste generated from the nuclear facilities?**

The operation of nuclear facilities produces waste with varying levels of radioactivity, and different forms. Radioactive waste requires careful management for protection of people and environment. It is first characterized to determine its physical and chemical properties and the radioactivity. Thus there could be very low level waste to High level waste, which require a graded treatment options. The basic principles of radioactive waste management followed internationally are (i) dilute and disperse, (ii) delay and decay and (iii) concentrate and contain.

In terms of volume, solid radioactive waste is a very small portion of all waste.

Whatever the type of waste is, it is ultimately ensured that there is no discharges above the AERB set limits and no exposures to the public.

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