



Atomic Energy Regulatory Board



75
Azadi Ka
Amrit Mahotsav

e-Newsletter

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“The mission of AERB is to ensure that the use of ionising radiation and nuclear energy in India does not cause undue risk to health of people and the environment”



From the Chairman's Desk

“ It was my pleasure to join my fellow board members, colleagues and their family members to celebrate Formation Day of AERB on November 26, 2021, commemorating thirty-seven years of its formation. ”



Dear Readers,

With the second wave of COVID-19 fading away, the last quarter of 2021 has been quite eventful. AERB continued functioning in the hybrid model through a judicious mix of physical interactions and web-based platforms for most regulatory activities, including safety review of nuclear and radiation facilities licensing and regulatory inspections. In addition, various awareness and safety promotional activities, theme meetings towards safety promotion for stakeholders and inter-ministerial coordination for strengthening the regulatory interfaces were continued.

As part of the regulatory framework, two very important Safety Directives, one defining 'Radioactive Substance' and the other on 'Exemption of Radiation Generating Equipment', were issued. These Directives will play an important role in deciding the scope and domain of regulatory oversight. In addition, AERB has streamlined its radiological impact assessment methodology and has issued a Safety Manual, which will be quite helpful in the near future during site evaluation of upcoming nuclear reactors.

As part of knowledge management, AERB conceptualised and started organising a series of webinars on sharing Operating Experience Feedback on significant past events. These are being archived for future references. The first of its kind exercise of Safety Culture Assessment of AERB with all staff members' active participation was highly insightful, and so was the comparison exercise of Safety Performance of operating nuclear power plants using the newly evolved Safety Performance Indicators.

The training and awareness of law enforcement authorities on the security of radioactive sources are being conducted on a large scale with the active participation of state authorities. For example, a webinar on the theme "Security of Radioactive Sources" was organised with the coordination of the Andhra Pradesh (AP) Police on November 10, 2021.

AERB also conducted webinars through the AERB YouTube channel for radiation workers/radiation professionals on varied topical issues. For more comprehensive outreach, in a first of its kind initiative, webinars in vernacular languages were arranged and broadcasted through social media platforms like YouTube e.g. "Safe Work Practice in Industrial Radiography" in Hindi and "Radiation Protection in Diagnostic Radiology" in Oriya, Bengali, Hindi, Punjabi, Malayalam and English.

A key attribute that has emerged during the pandemic is the orientation of licensees towards "Self-regulation" through active involvement of its in-house resources such as Technical Audit Engineers, Quality Assurance Experts, Radiological Safety Officers, Industrial and Fire Safety Professionals etc. To understand the insights gained through these self-regulatory

practices, AERB hosted the one-day National Conference on Regulatory Interface (NCRI-2021) to continue to obtain feedback from the stakeholders and to improve the regulation further. In addition, AERB also jointly hosted the DAE Safety and Occupational Health Professional Meet with IREL on October 08-09, 2021, with themes, "Self-regulation for Safety" and "Challenges and Opportunities in Occupational Health during COVID-19 Pandemic".

It was my pleasure to join my fellow board members, colleagues and their family members to celebrate Formation Day of AERB on November 26, 2021 commemorating thirty-seven years of its formation. It is a joyous moment for the entire AERB family to celebrate its illustrious journey. AERB has emerged as a knowledge-based organisation of high international standards with state of the art scientific capabilities, maintaining a high level of professionalism, credibility, transparency and accountability in the domain of its regulatory responsibilities. This is the fruit of efforts made by our predecessors and the contribution of our entire AERB fraternity. I also want to assure you that as part of our continuous endeavour towards competency enhancement of our staff, it will be continued in future also.

As you all know, to commemorate the 75th year of India's independence, our country is celebrating Azadi Ka Amrit Mahotsav. AERB has joined the year-long celebrations and has started conducting various awareness and scientific events and competitions. I am delighted to share that awareness cum competition programmes were conducted at a government school at Amarut village, Gaya, Bihar, and RM School and Oriental College, Imphal.

I join all my colleagues of AERB to pay our respects to Shri S.D. Soman, former Chairman, AERB, who passed away on November 7, 2021. AERB will remember his noteworthy contribution in streamlining the functioning of AERB and establishing it as an effective and efficient regulatory organisation.

AERB as the national regulator for radiation safety in the country, reaffirms its commitment towards ensuring safe use of nuclear energy and radiation applications for the betterment of society. Lastly, let us all stand united in our fight against corona by adopting the principles which are very much similar to radiation protection.

"Ionising radiation shall be handled for societal benefit with care not with fear",

Stay Safe.

(G. Nageswara Rao)



1.0 Safety Review and Regulation

AERB functioned with up to full staff strength from its Headquarters in Mumbai, following the COVID-19 appropriate behaviour and preventive measures. AERB continued to use the web-based platforms for most of its regulatory activities including safety review, conducted on-line safety review meetings and carried out remote regulatory inspections for continued regulatory oversight over nuclear and radiation facilities during the last quarter of 2021.

After five consecutive virtual meetings, the Board of AERB held its first physical meeting since the onset of pandemic on November 26, 2021. The Board started the meeting with the observance of Constitutional Day of the country. Board was informed of the highlights of the important activities conducted by AERB during the previous quarter(s) and the safety status of the regulated installations. The Board was briefed of the safety directives issued on radioactive

substance and exemption of radiation generating equipment, one complaint received against NPCIL and the modification in Syllabi and Evaluation Criteria for training courses on radiological safety.



The 135th meeting of the Board of AERB in Progress

1.1 Consenting of Nuclear and Radiation Facilities

In ensuring safety and security, it is of immense importance that regulators understand their roles and responsibilities well. It helps to address the unique challenges involved in ensuring nuclear, radiological, fire and industrial safety in the facilities towards protecting people and the environment. Assuring the above, AERB has granted/permitted the following licences/consents after detailed safety review & assessment as per applicable provisions, and its satisfactory outcome:

- i. The clearance to Gorakhpur Haryana Anu Vidyut Pariyojana (GHAVP-1&2) for construction of various safety-related structures and extension of the validity of excavation clearance for other safety structures activity in progress up to March 31, 2023.
- ii. Construction clearance for Onsite Emergency Support Centre (OESC) at Tarapur Atomic Power Station (TAPS) site.
- iii. Extension of the validity of consent for Siting &

Construction for Magnesium Recycling Technology Development & Demonstration Facility (MRTDDF) of Zirconium Complex (ZC), located at Pazhayakayal, Tuticorin up to March 31, 2023.

- iv. Extension of the validity of the Licence for operation to Technology Demonstration Plant (TDP) at M/s Rashtriya Chemicals & Fertilizer Ltd. (RCF) Chembur, Mumbai set up by the Heavy Water Board (HWB) up to October 31, 2026.
- v. Extension of the validity of the Licence for operation of ECIL-Tirupati, engaged in manufacturing of nuclear industrial instrumentation upto October 31, 2026.
- vi. 1,284 approvals of radiological safety officers (RSOs) and 5,636 Licences for radiation facilities involving industrial, medical and research activities.

1.2 Development of electronic-Safety Performance Indicator (eSPI) for Radiation Facilities

AERB uses an e-platform (e-LORA) to issue various consents for several practices in multiple stages of radiation facilities practiced in industry, healthcare, research, etc. AERB has developed an electronic-Safety Performance Indicator (eSPI) for radiation facilities. The value of eSPI is a

performance index on the radiological safety of the Institute. It is derived based on parameters such as non-submission of safety status report (SSR) for more than a year by Institute, reported excessive exposure in the Institute, pending non-compliance and enforcement initiated against Institute during previous three years.



2.0 Regulatory Inspection and Enforcement Actions

AERB continued to extensively use the virtual platforms for remote Regulatory Inspections (RI) to ensure continuity in regulatory oversight of nuclear and radiation facilities. The virtual RIs were conducted using self-assessment checklists. The assessment reports are reviewed by a team of inspectors at AERB and meetings were held through video conferencing with the licensees to verify certain compliances, as necessary.

2.1 Regulatory Inspections of Nuclear and Industrial Facilities (NIFs)

During the quarter, routine remote regulatory inspections (RI) were initiated for 15 nuclear facilities (nuclear, radiological & industrial). There was no deviation of

‘moderate’ or ‘high’ safety significance. A special regulatory inspection of Kakrapar Atomic Power Plant (KAPS)-3&4 was carried out during the period for observing the limited modification work being carried out in KAPS-4 which is also a mock-up activity for KAPS-3.

2.2 Regulatory Inspections of Radiation Facilities (RFs)

164 routine and 10 special remote RIs of radiation facilities were carried out. Inspection Reports of 156 facilities were issued after review & harmonization. During these inspections, no deviation of ‘moderate’ or ‘high’ safety significance was reported.

3.0 Off-site Emergency Exercises (OEE) at NPPs

To assess the efficacy of response mechanisms in public domain near Nuclear Power Plant (NPP) sites for a hypothetical accidental condition, off-site emergency exercises (in the public domain) are conducted. AERB and NDMA officials participated as “Observers” in the Integrated Command Control and Response (ICCR) exercise conducted at Kudankulam Nuclear Power Plant Site and Kalpakkam Site on November 23 and December 14, 2021 respectively. Such exercises are conducted to observe the response and decision-making capabilities by NPP and District Authorities, in case of an accident at NPP. The Emergency Response Centres within the Site and at District HQ were activated.

AERB also monitored the exercise through Nuclear and Radiological Emergency Monitoring Centre (NREMC) at AERB, Mumbai. As part of the NREMC functioning, dedicated computer codes for source term estimation, weather prediction and atmospheric dispersion necessary for assessment of radiological impact were used, demonstrating its capability of independent monitoring and assessment of emergency conditions at NPPs, should they arise.

Vision

“The vision of AERB is to be a knowledge organisation of high international standards with state of the art scientific capabilities and to maintain high level of professionalism, credibility, transparency and accountability in the domain of its regulatory responsibilities.”



4.0 Safety Promotional Activities

4.1 Conference / Theme Meeting / Webinar / Awareness Program

(I) DAE Safety & Occupational Health Professionals Meet, 2021

The 37th DAE Safety & Occupational Health Professionals Meet, 2021, was jointly organised by Atomic Energy Regulatory Board (AERB) and IREL (India) Limited during October 08-09, 2021. The themes of the Meet were “Self-regulation for Safety” related to industrial safety aspects and “Challenges and Opportunities in Occupational Health during COVID-19 Pandemic” on occupational health aspects. The meet was organised in hybrid mode. AERB Safety Awards for



A Glimpse of DAE Safety Meet

the year 2019 and 2020 were also presented to the winner DAE units in the inaugural session of the Meet. Around 200 delegates from various DAE units & its aided institutes participated in the meet. Chairman AERB addressed the gathering. During the Meet, publications such as Monograph for the Meet, AERB Booklet on Occupational Injury Statistics & Fire Statistics of DAE units for the year 2020 and Compendium of IREL (India) Limited were released.

(ii) Webinar for Andhra Pradesh Police on Security of Radioactive material

AERB organised webinar on ‘Security of Radioactive Sources’ for users of Radiation Facilities (Category-1&2 sources) and police officials in the state of Andhra Pradesh (AP) on November 10, 2021. The webinar was conducted with the support of Office of Inspector General (Security), Department of Atomic Energy (DAE) and DGP, Andhra Pradesh (AP). About 50 representatives from various radiation facilities and 100 Andhra Pradesh police officials participated in the webinar. The webinar provided the common platform

to disseminate requirements for ensuring security of radioactive sources and apprise the role of law



Webinar on security of radioactive material

enforcement authorities. Shri G Nageswara Rao, Chairman AERB, Shri D. Gautam Sawang, Director General of Police, AP and Shri Vinayak Apte, IG (Security), DAE addressed the webinar participants. Shri N. Sanjay, Director, Andhra Pradesh Police Academy elucidated the importance of training on security of radioactive source. AERB also provided the guidance/awareness material on the basic applications of radiation for societal benefits, national regulatory framework for radiation, safety and security aspects of radioactive sources to the participants in regional language (Telugu).

(iii) National Conference on Regulatory Interface (NCRI-2021)

AERB hosted 5th National Conference on Regulatory Interface (NCRI-2021) on November 11, 2021 at Mumbai. Theme of the conference was “Self-Regulation for Safety”. A key attribute that has emerged during pandemic period is the orientation of licensees



Shri C.S. Varghese, ED, AERB addressing the NCRI-2021



towards “Self-regulation” through active involvement of its in-house resources. The objective of the conference was to provide a platform to the licensees to exchange views on self-regulatory practices for ensuring safety. Two major Licensee organizations viz. Nuclear Power Corporation of India Limited (NPCIL) and Heavy Water Board (HWP) were invited to present their experiences during NCRI-2021. The conference was conducted in hybrid mode.

(iv) Theme Meeting on Computer Code

AERB organised a theme meeting on “Computer Codes: Status of Indigenous Development”, on December 21, 2021, with representation from AERB and DAE units. The theme meeting intended to take stock of available computational tools being used in various units of DAE and AERB for nuclear safety analysis. The theme meeting discussed aspects such as the status of indigenous development, their validation

matrix, quality assurance, data preservation and future plans.

(v) Awareness

With an objective to educate the user on proper handling of TLD and provide the information on other safety measures to avoid radiation exposure, it was decided to organize webinars on “Radiation Protection in Diagnostic Radiology (DR)” and “Safe Work Practice in Industrial Radiography (IR)” for various states in their regional languages through the “YouTube” platform. The information on proposed programmes in respective language was communicated to the targeted audience in advance. Awareness programmes (webinar) were conducted for radiation workers / professionals on the topics like (i) Type Approval Requirements and Procedures for Industrial Radiography X-ray Equipment, (ii) Management of Pregnant Woman and Lactating Mother for protection against ionizing radiation, (iii) Management of Disused Sources for NG Institutions, (iv) Proper use of TLD badges for radiation workers/professionals based on analyses for non-genuine radiation exposures from Diagnostic Radiology, (v) Safe work Practice in Industrial Radiography in Hindi, and Radiation Protection in Diagnostic Radiology in Oriya, Bengali, Hindi, Punjabi, Malayalam and English.



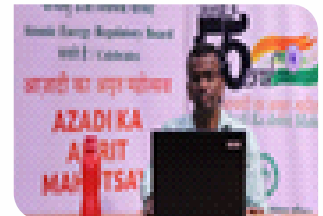
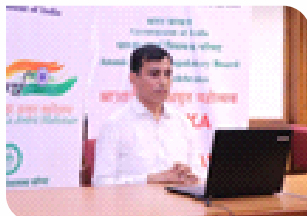
Shri Avinash J. Gaikwad, Head, R&DD delivering lecture in Theme Meeting

Glimpses of Awareness Programme

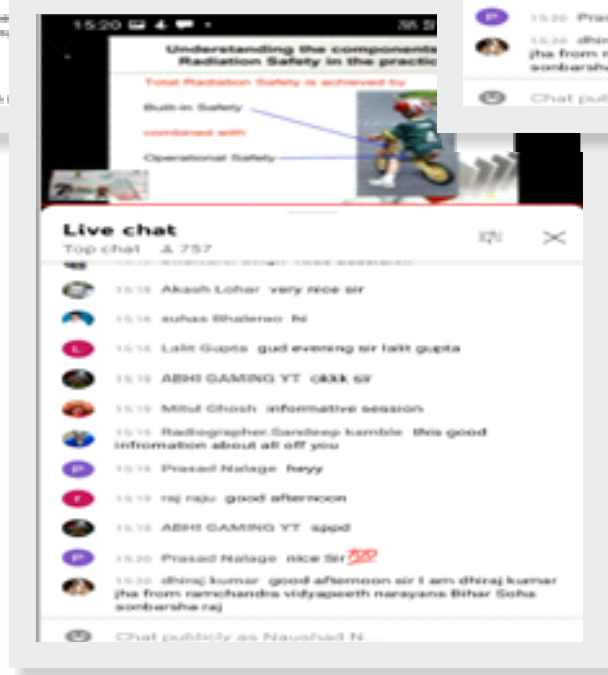
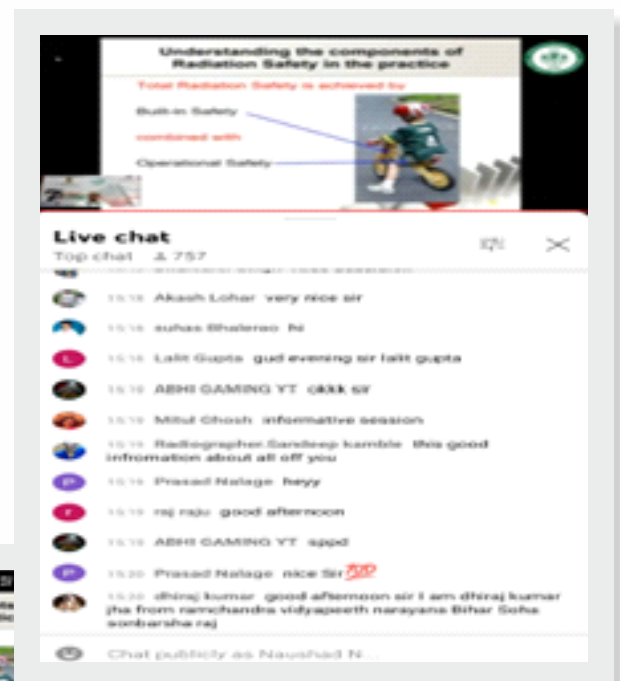
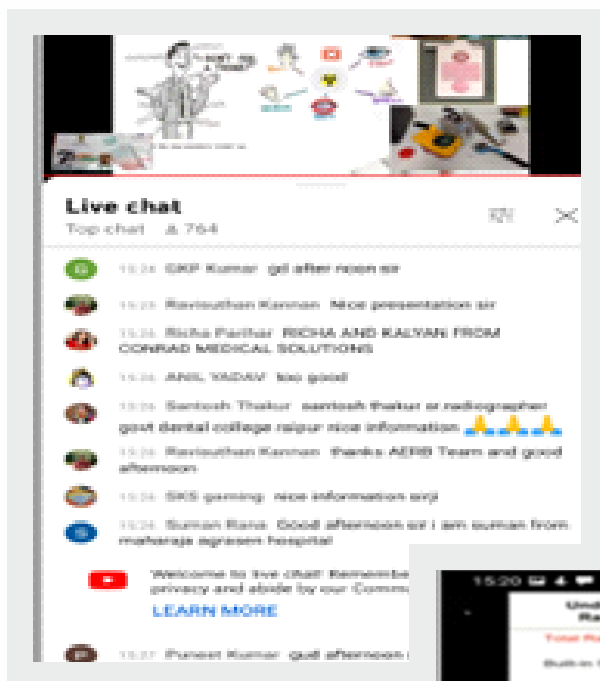




Glimpses of IR Hindi & DR Hindi, Malayalam & Oriya



Glimpses of live- streaming feed back / live chat during awareness programmes



5.0 Humam Resource Development / Refresher Training

5.1 Refresher training on 'Containment Safety'

AERB conducted two refresher trainings on 'Containment Safety' comprising of 28 lecture series for the officials of AERB and NPCIL. The lecture materials of training course on 'Containment Safety' was up-loaded on AERB's knowledge management portal.

5.2 Refresher training on 'Accelerators and their Safety'

Refresher training on 'Accelerators and their Safety' comprising of 10 lecture series was organised for the 29 participants from AERB. The lecture materials of this training course were up-loaded on AERB's knowledge management portal.

6.0 Implementation of Official Language

On December 02, 2021, a joint Hindi Workshop was organised by AERB and BRIT, Mumbai at Niyamak Bhavan-A, Anushaktinagar, Mumbai. A lecture was delivered by the

Assistant Director(OL), AERB, in this workshop. In addition, a Hindi essay writing competition was organised for officers and employees in AERB in September 2021.



Participants of Hindi workshop held on December 02, 2021



7.0 Celebration of Important Events

AERB celebrated its 38th Formation Day on November 26, 2021. The programme was conducted in hybrid mode. The programme was held in Niyamak Bhavan Auditorium with a limited audience following Covid-19 protocols. Safety Research Institute, Kalpakkam, Southern Regional Regulatory Centre, Eastern Regional Regulatory Centre and Northern Regional Regulatory Centre attended the programme virtually. AERB Board Members were the Chief Guests for the function. The Programme commenced with welcome address by Chief Administrative Officer, AERB, followed by inauguration with Saraswati Vandana, and

lighting of the lamp. Opening remarks by Executive Director, AERB were followed by Address by the Chief Guests and Chairman, AERB. The Board Members gave inspiring talks on their journeys and the hard work put by them while pursuing their research activities. Their lectures were quite impactful for young officers and staff of AERB Secretariat. AERB released the special logo on “Azadi Ka Amrit Mahotsav” and its Organisational Brochure for distribution among stakeholders and the public during safety promotion and outreach events.

Team Members receiving ‘AERB Group Achievement Award-2019’



Smt. K. Uma Sarma



Dr. Pankaj Tandon



Shri S.C. Utkarsh



Shri Diptojoyoti Bhattacharya



Shri C. S. Varghese receiving
AERB Leadership Award-2019



Smt. Neena Jayashankar, receiving,
AERB Meritorious Service Award-2019

AERB Young Scientific / Technical Officer Award



Shri Subrata Pathak (SO/E, RSD)



Shri Soumyadip Dey (SO/E, OPSD)



Shri Krishna Reddy (SO/D, DRP&E)

Outstanding Performance/ Special Contribution Award



Smt. Manju Saini (SO/F, RSD)



Dr. R. Srinivasa Rao (SO/G, NSAD)



Shri Vivek Piplani (SO/G, OPSD)

Glimpses of AERB DAY Celebrations



Glimpses of Cultural Programme on AERB Day Celebration



8.0 Azadi Ka Amrit Mahotsav

As we all know, to commemorate the 75th year of India's independence, our country is celebrating Azadi Ka Amrit Mahotsav. AERB too has joined the yearlong celebrations and has started conducting various awareness and scientific events and competitions. Chairman, AERB emphasized that the young generation has to be made aware of the achievements, actions, resolutions of the Country in 75 years so that it will inspire them to move forward and to realize the dreams of an independent India. AERB also conducted public awareness programmes on radiation safety, debate and elocution completion in various academic institutes, schools and colleges.



Glimpse of poster during Azadi Ka Amrit Mahotsav



9.0 Appointments / Retirements

AERB workforce is being augmented at different levels and through various channels because of the expanding nuclear power programme and an increasing number of radiation facilities. The total sanctioned strength in AERB is 468. However, in-position strength as on December 31, 2021 is 350 comprising of 304 Scientific & Technical and 46

Administrative / Accounts / Auxiliary staff. During the period, five scientific officers in the grade of SO(C) from BARC and IGCAR Training Schools have joined AERB. One Technical Officer has joined through direct recruitment. Other staff, technical as well as administrative, have also joined as per the following list.

Sr. No.	Name	Designation	Date of Joining
1.	Shri Gyanshu Vishwakarma	Scientific Officer/C	01-11-21
2.	Shri Tushar Ashok Ghoradkar	Scientific Officer/C	01-11-21
3.	Shri Deepjyoti Acharjee	Scientific Officer/C	01-11-21
4.	Shri Deepak Bhagore	Scientific Officer/C	01-11-21
5.	Shri Amit Prajapati	Scientific Officer/C	01-11-21
6.	Shri Ashay Haridas Tayde	Technician B	26-11-21
7.	Ashutosh Kumar Dubey	Sr. Translation Officer	06-12-21
8.	Kum. Lipsarani Sahoo	Scientific Assistant/C	10-12-21
9.	Shri Vishal Bansee Shinde	Scientific Assistant/C	10-12-21
10.	Shri Amit Ramesh Chavan	Scientific Assistant/C	10-12-21
11.	Shri Lalam Govinda	Scientific Assistant/C	10-12-21
12.	Shri Varshan B P	Scientific Assistant/C	10-12-21
13.	Shri Harshal Vilas Baviskar	Scientific Assistant/C	10-12-21
14.	Kum. Tanya Verma	Scientific Assistant/C	10-12-21
15.	Shri Bhupendra Singh	Scientific Assistant/C	10-12-21
16.	Kum. Aditi R. Kulkarni	Scientific Assistant/C	10-12-21
17.	Shri Akshay Mali	Scientific Assistant/C	10-12-21
18.	Shri Krishnu Das	Scientific Assistant/C	10-12-21
19.	Shri Jitender Kumar	Scientific Assistant/C	10-12-21
20.	Shri Mukut Kumar	Scientific Assistant/C	10-12-21
21.	Shri Arvind Kumar	Scientific Assistant/C	10-12-21
22.	Shri Subhashish Sardar	Scientific Assistant/C	10-12-21
23.	Shri Nitesh Kumar	Scientific Assistant/C	10-12-21
24.	Shri Pawan Kumar	Scientific Assistant/C	23-12-21
25.	Dr. (Smt.) Trupti Prasanna Hinge	Technical Officer/E	31-12-21

Personnel Retired/Transferred/Resigned from AERB during October-December, 2021:

Sr. No.	Name	Designation	Date	Remark
1	Shri Hardik Setia	UDC	23-12-2021	Technical Resignation

10.0 AERB bids Farewell to its Former Chairman

Condolence Message to Shri S. D. Soman's bereaved family

With great sadness, we learned of the passing away of Shri S. D. Soman, former Chairman of the Atomic Energy Regulatory Board, on 7th November 2021. AERB shall forever be indebted to his vast contribution in streamlining functioning of AERB and in establishing it as an effective and efficient regulatory organization during his tenure 1990-1993. AERB profoundly mourns the demise of Shri Soman. We on behalf of the AERB management and staff extend our heartfelt condolences to the bereaved family.



Late Shri S.D. Soman

Feedback

We appreciate feedback from readers/stakeholders. If you have any question or comment, please send us on AERB Feedback Portal.

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REGULATORY BOARD

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