

EXECUTIVE SUMMARY

During the year 2020, Atomic Energy Regulatory Board (AERB) continued to monitor safety aspects of all facilities and activities involved in nuclear energy and applications of ionising radiations under its purview. AERB continued the activities to fulfil its mission and to strengthen itself as a more effective and efficient regulator towards achieving its vision.

Board of AERB, which is the decision making body on policy matters for regulation of nuclear and radiation facilities and associated activities. AERB continued to carry out its functions with the support of its secretariat, its technical divisions and specialist committees.

The Board met thrice during the year 2020 and two of these meetings were held through

video conferencing. The Board was apprised of the periodic safety status of Nuclear Power Projects under construction/commissioning, operating Nuclear Power Plants, Nuclear Fuel Cycle Facilities and large number of Radiation Facilities in the country. Board was also briefed on the guidance document developed for implementation of graded approach in regulatory processes of AERB.

The important safety proposals reviewed and approved by the Board were permissions for bulk addition of Heavy Water to the Moderator System, First Approach to Criticality, Low Power Reactor Physics tests & experiments for KAPP-3. Also accorded approval for issuance of Consent for Siting of Kaiga-5&6 projects and Consent for First Pour of Concrete to GHAVP-1&2 projects.



AERB Board Meeting in Progress

AERB has been deriving continuous technical and scientific support from BARC in the field of regulation of nuclear and radiation safety in the country. In a step towards formalising the existing mechanism, AERB had entered into a Memorandum of Understanding (MoU) with BARC for continued and sustained support. The same was reaffirmed on February 24, 2020

through a formal agreement signed by Director, BARC and Chairman, AERB.

Safety Surveillance of Nuclear Power Projects

AERB had given clearance for First Pour of Concrete (FPC) to KKNPP Unit-3&4 on June 23, 2017 with certain stipulations. Subsequently,



Shri G. Nageswara Rao, Chairman, AERB and Dr. A. K. Mohanty, Director, BARC signing an Agreement for Technical and Scientific Support

construction activities were initiated and remained in progress for safety related buildings. As part of FPC stipulations, AERB carried out review of design adequacy checks for critical locations of civil structures following AERB safety standards, and of concrete mix designs for normal and heavy concrete. Additionally, NPCIL requested for erection of core catcher. The request was reviewed and erection of Core Catcher was also completed. NPCIL submitted Application for Erection of Major Equipment (MEE) in August 2020 which is under review.



View of KKNPP-3&4

Clearance for Excavation to KKNPP-5&6 was issued on November 14, 2018 with certain stipulations. Excavation of main plant area was completed. Review of analysis reports for safety related buildings was completed. KKNPP-5&6 submitted application for FPC along with PSAR and review of the same is in progress.

Commissioning activities are in progress at Prototype Fast Breeder Reactor (PFBR). Subsequent to AERB clearance, 42 fresh fuel sub-assemblies (FSA) were received and safely stored in the storage facility. AERB is monitoring the aspects related to safe storage of these FSAs. Towards rectification of Large Rotatable Plug (LRP) bearing, works related to inspection of load and spacer balls, greasing, placing of balls on bottom race and top race activities were completed. Further testing activities and inspection of back-up seal in LRP were in progress.

After satisfactory review of light water commissioning activities and tests associated with moderator and auxiliary systems in Unit-3 of

KAPP, AERB issued permission for draining of Light Water from Moderator System on January 13, 2020.



ACPSR Meeting through Video Conferencing

Subsequent to clearance by AERB for Initial Fuel Loading (IFL) into the Reactor Core on February 28, 2020, fuel loading was completed and many tests were carried out at KAPP-3. AERB reviewed progressive submission and application for bulk addition of Heavy Water to Moderator System and First Approach to Criticality (FAC) and low power reactor physics tests and experiments. Taking note of the satisfactory conclusions of all the related safety reviews and comments, the Board agreed to give clearance for FAC to KAPP-3. The FAC clearance was accorded on July 17, 2020. KAPP-3 achieved first criticality on July 22, 2020. After completion of Phase-B Low Power Physics Experiments, AERB issued authorization for Phase-C Commissioning (i.e. raising reactor power in stages) at KAPP-3 on November 02, 2020.

Erection of equipment / components and pre-commissioning activities remained under progress at KAPP-4. Civil construction activities

were in progress at RAPP-7&8.

With regard to Gorakhpur Haryana Anu-vidyut Pariyojana (GHAVP), AERB had issued Siting Consent for locating the four Units of 700 MWe PHWRs in July 2015 and Excavation Consent for GHAVP-1&2 in January 2018. The units are similar in design to the lead units of 700 MWe PHWRs under commissioning at KAPP-3&4. AERB reviewed NPCIL submissions in detail towards the next phase of construction i.e. FPC. After examining all the safety reviews, the Board of AERB accorded approval for issuance of consent for FPC for twin units of GHAVP-1&2. The consent was issued on November 18, 2020.

Another set of twin units (KAIGA-5&6) of 700 MWe PHWR are being installed at the existing site of Kaiga. After examining the outcome of detailed safety review by AERB committees, the Board accorded approval for issuance of Siting consent to Kaiga-5&6. AERB issued Siting

Consent to Kaiga-5&6 on November 18, 2020.

AERB reviewed pre-commissioning test reports of DFRP. Fabrication and erection work was in progress for head-end facility. Commissioning activities w.r.t. Acid-Tri-butyl phosphate (TBP) runs have been completed.

Construction consent to NFC-Kota was granted on February 05, 2018 with certain stipulations. Currently, construction of PHWR Fuel Fabrication Facility (PFFF) and Zircaloy Fabrication Facility is under progress.

Safety Surveillance of Nuclear Power Plants (NPPs) and Research Reactors (RRs)

AERB continued its regulatory supervision of 22 operating NPPs in India. The radiation exposure to occupational workers in these plants was below the prescribed limit. The station's submissions were extensively reviewed in multi-tier systems as per the established mechanism in AERB.

AERB renewed the licences for operation under the Atomic Energy Act, 1962 (and rules framed thereunder), the Factories Act, 1948 (and rules framed thereunder) and authorization for safe disposal /transfer of radioactive waste under GSR-125 of RAPS-5&6, KKNPP-1&2 and MAPS-1&2. AERB had also renewed the licence for operation of KAMINI under the Atomic Energy Act, 1962 (and rules framed thereunder).

In this year, total 34 significant events were reported from the operating NPPs. The event reports were reviewed in AERB to see the adequacy of investigations, corrective actions, lessons learnt and the need for any regulatory actions. The events were rated on INES scale.

Implementation of identified long term enhancements based on Post Fukushima such as provision for management of hydrogen,

construction of Onsite Emergency Support Centre (OESC), installation of Containment Filtered Venting System (CFVS) are in progress at various NPP sites. As a part of hydrogen management provisions, out of 17 operating PHWR units, Passive Catalytic Recombiners (PCR) have been completely installed at 9 units and partially installed at remaining 8 units.



Scrubber Tank installation at TAPS-3&4

Safety Surveillance of Nuclear Fuel Cycle Facilities and other related Industrial Facilities

AERB continued to review the safety aspects of the Nuclear Fuel Cycle facilities under its purview. During this year, AERB renewed licences for operation of Bagjata Mine, Jaduguda Mill and Rare Earths Extraction Plant (REEP) at IREL (India) Ltd., OSCOM. AERB also renewed the licences for operation of Heavy Water Plants at Kota, Talcher and Manuguru. AERB granted the consent for Siting of solvent extraction plant at HWP-Tuticorin; consent for Siting and Construction

AERB is responsible for administration of the Factories Act, 1948 and the Atomic Energy (Factories) Rules, 1996 in all the units of DAE under its purview.

for setting up 24kA prototype sodium cell at HWP, Baroda and approval for setting up New Extrusion and Fuel Tube Facility at NFC, Hyderabad. AERB renewed the licence for operation of ECIL, Hyderabad and extended Stage-1 commissioning approval of Medical Cyclotron at VECC, Kolkata. Also granted commissioning consent for Stage-2 of INDUS Linac-2 to RRCAT, Indore.

AERB reviewed the industrial and fire safety aspects of the facilities under its purview. Accidents of serious nature at NPP and FCF were investigated and reviewed in AERB. The lessons learnt from these accidents were disseminated to all DAE units

The details on Safety Surveillance of Nuclear Power Projects, Operating Plants, Research Reactor and, Nuclear Fuel Cycle Facilities & other related Industrial Facilities are given in Chapter-1

Safety Surveillance of Radiation Facilities (RF)

AERB carried out safety review of various facilities using radiation sources and equipment in industry, medicine, agriculture and research. AERB issued about 18,951 licences (i.e. licence, authorisation and registration) for operation of various RFs following the graded approach, granted 4,574 permissions for procurement of radioactive sources (imported and indigenous) besides 11,842 permissions for procurement of diagnostic X-ray equipment. Approved 3,256 certified personnel as Radiation Safety Officers (RSO). Total 662 approvals were given for export of radioactive sources and 80 approvals for returning the sources to Indian supplier or authorised radioactive waste management site(s), as per the terms and conditions of the licence and policy.

Regulation of RFs is carried out through AERB's e-Licensing of Radiation Applications (e-LORA) system. It is a user-friendly interface with applicants and licensees of various RFs located across the country. With e-LORA, AERB has strengthened its regulations of diagnostic X-ray equipment which resulted in significant increase in issue of licences of this equipment. Total 87,432 X-ray equipment were licensed in e-LORA till December 2020.

BARC has developed First-of-a-Kind eye plaque with ^{106}Ru radioactive source for brachytherapy treatment of eye cancer. Based on safety review and witnessing the Type approval tests, AERB issued approval of Classification Designation to ^{106}Ru eye plaque.

To facilitate the utilities to rationalize the issuance of TLDs to their staff, AERB prepared a

guidance document on 'Personnel Monitoring of Radiation Workers in Radiation Facilities'. To create an awareness amongst stakeholders a booklet on 'Radiation Safety in Diagnostic Radiology' was translated in Hindi and uploaded on AERB website.

The details of safety surveillance of radiation facilities during this period are given in Chapter-2.

Regulatory Inspection (RI) of Nuclear and Radiation Facilities

The regulatory inspection programme faced a major challenge during the COVID-19 pandemic, due to the nation-wide lockdown, which restricted the movement of people across the country. Accordingly, physical inspections at nuclear, industrial and radiation facilities was suspended since February 2020. In the absence of the regular inspections, an alternate method of enhancing regulatory oversight over the licensed activities/facilities has been developed. This involves self-assessment of the activity/facility by the licensee based on checklists developed by AERB. Subsequently, the reports on these self-assessments were reviewed along with the sample basis evidences and interactive video conference meeting(s) with the facility.

AERB on-site observers located at NPP sites [Rawatbhata, Kalpakkam, Kakrapar and Kudankulam] continued to visit respective facilities, except for the period of local site-specific restrictions, and observed the status of plant and activities at these sites. Officers at Regional Regulatory Centres (located at Delhi, Kolkata and Chennai) were in a state of readiness to cater to any requirement of special inspections.

During the year, total 35 physical regulatory inspections and 39 remote regulatory inspections of Nuclear & Industrial Facilities (N&IF) covering nuclear, radiological & industrial safety and security aspects (affecting safety). Apart from this 440 radiation facility were inspected by officers from Headquarters (HQ) and Regional Regulatory Centres.

Special Inspection of KAPP-3 was carried out (through virtual mode) to check plant status, verify the compliance to the requirements for the



Glimpses of Remote Regulatory Inspection of Radiation Facilities

Phase-B commissioning and preparedness for Phase-C commissioning activities.

The details of regulatory inspection of nuclear and radiation facilities during this period are given in Chapter-3.

Enforcement Actions in Nuclear and Radiation Facilities

Nuclear Facilities

One fatal incident of survey boat was reported from KKNPP-3&4 site. Subsequently, all construction activities (land and sea based) of the permanent dyke and flow training dyke were suspended by NPCIL. AERB reviewed the incident in detail and based on the improvements in the safety management system implemented by Site, permission was granted to restart land-based construction activities at dyke.

A letter on 'Enhancement of Safety Supervision at KKNPP-3 to 6 Site' was issued in

view of increase in the occupational health safety related incidents at KKNPP-3 to 6 site.

Radiation Facilities

AERB suspended licence for operation of a Radiography Institution for one year owing to violations of safety requirements and withdrawn approval of RSO and Radiographer responsible for a period for indulging in unsafe industrial radiography operations.

Radiation Professional (RP) Certificate was misused by two professionals for obtaining RSO approval to facilitate eight nucleonic gauge institutions for procurement of NG with radioactive source from one of the NG supplier. AERB issued warning letters to eight NG institutions and concerned supplier for committing improper work practices.

The details of enforcement actions in nuclear and radiation facilities during this period are given in



Environmental monitoring activities during ICCR Off-Site Emergency Exercise at KGS site



Field Survey by ESL Team during Off-site Emergency Exercise at Rawatbhata site

Chapter-1 and 2 respectively.

Environmental Safety and Occupational Exposures

Environmental safety in the vicinity of nuclear installations is ensured through control on radioactive discharges into the environment and environmental monitoring. AERB has further specified limits on effluent discharges through gaseous, liquid routes, in the Technical Specifications for operation of NPPs. The actual discharges from the plants are observed to be well below the limits specified.

Nuclear and radiation facilities have established radiological surveillance programme and work procedures intended to control the occupational exposures. In the year 2020, there was no case of individual radiation exposure above the prescribed annual dose limit of 30 mSv in nuclear and radiation facilities.

The Status of Environmental Safety and Occupational Exposures are given in Chapter 4.

Emergency Preparedness

NPPs continued to carry out Plant and Site Emergency Exercise as per schedule. During the year, annual site emergency exercises were conducted at seven NPP sites. AERB officials could not participate as observer in emergency exercises (since March 2020) due to COVID-19 pandemic preventive measures. However, exercises were reviewed based on reports submitted by the facilities subsequent to completion of the exercises. The Off-Site Emergency Exercise (OSEE) framework has been strengthened through conduct of different types of exercises, viz. Table-Top (TT) exercise and Integrated Command Control and Response

(ICCR) OSEE.

The ICCR OSEE was conducted at three NPP sites viz. Kaiga, Rawatbhata and Kakrapar. All the Stakeholders viz. NPP Management, District Authority, NDMA, AERB/ SOT, DAE-CMG, RERD-BARC participated in the exercises either physically or monitored remotely from their respective locations. Major findings were noted by all the Stakeholders and discussed in the feedback meeting for further improvements.

After March 2020, the ICCR OSEE could not be conducted due to the restrictions imposed on movement and involvement of relevant Stakeholders from the public domain considering COVID-19 preventive measures. AERB advised NPPs to continue testing their preparedness for OSEE through conduct of Table-Top (TT) exercises. Accordingly, TT OSEE was conducted at four sites to ensure preparedness of plant authorities for responding to any off-site emergency situations.

The Status of Emergency Preparedness of the Nuclear Facilities is given in Chapter 5.

Regulatory Safety Document Development

One of the core activities of AERB is to develop the safety regulation for stakeholders. Development and revision of Regulatory Safety Documents (REGDOC) is a continual process of AERB to keep itself updated in line with international recommendations and good practices. Through this process, the existing regulatory documents are taken up for revision, and additional regulatory documents are also taken up for development.

During the year, following three Safety Guides were approved and uploaded on AERB

website:

- ❖ Design Basis Events for Water Cooled Nuclear Power Plants;
- ❖ Design of Electrical Power Systems For Nuclear Power Plants;
- ❖ Accident Management Programme For Water Cooled Reactor Based Nuclear Power Plants.

About 20 regulatory safety documents are at various stages of development. 5 safety documents are translated in Hindi and are in the process of publication. AERB contributed in review of 18 draft Safety Standards and Documents Preparation Profiles (DPP) of IAEA and provided comments.

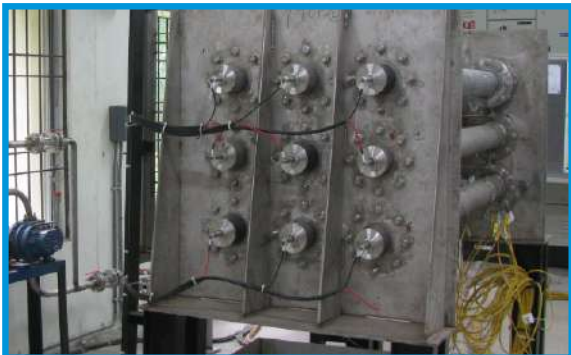
The Status of Regulatory Safety Documents are given in Chapter 6.

Safety Analysis, Research and Development

Safety studies were continued in areas covering severe accident, thermal hydraulics safety, reactor physics, probabilistic safety assessment, radiological assessment and environmental safety studies and experimental



WASIF Phase-I Setup



AGMS and coolant channel heat-up facility

studies.

At SRI, Kalpakkam experimental studies were carried out viz. (i) experiments in the field of cable fires in Compartment Fire Test Facility (CFTF); (ii) to investigate the in-vessel retention capability of calandria vessel during postulated severe accident conditions in Core Melt Retention Facility (COMREF); (iii) Water and Steam Interaction Facility (WASIF) to investigate Condensation Induced Water Hammer (CIWH) phenomena and (iv) AGMS and Coolant Channel Heat-up Facility for investigating coolant channel heat-up and annulus gas monitoring system related safety issues.

Carried out radiological assessment and environmental studies with AERB Source Term Estimation tool, synthesis and evaluation of strippable decontamination Gel for decontamination applications, as an effective and simple technique to remove radio-nuclides from contaminated surfaces.

AERB continued to develop in-house safety analysis codes/modules for various studies viz. estimation of decay heat from fission product inventory; severe accident analysis programme for PHWRs; Monte Carlo model for View factor calculation and continued analysis of ISOMED source storage cooling system.

AERB continued to promote and fund research projects on nuclear safety, radiation safety, front and back end fuel cycle safety related problems and industrial safety at academic institutions under the Safety Research Programme. Two new projects were approved and five on-going projects were renewed.

The details of various activities of Safety analyses and research are presented in Chapter-7

Stakeholders Engagement Activities

During the COVID-19 pandemic, AERB reached out to public and various stakeholders through the virtual platform.

AERB hosted 4th National Conference on Regulatory Interface (NCRI-2020) in virtual mode, with theme on 'Safety Regulation of Radiation Processing Facilities'. Objective of the



Chairman, AERB delivering inaugural address in the NCRI-2020



conference was to obtain regulatory experience feedback from stakeholders of Radiation Processing Facilities (RPF).

AERB also keeps organizing various events for safety promotion for licensees of nuclear and radiation facilities. During the year, the theme/discussion meets on topics like, QA in Welding and Framework & Regulation of Computer Security; and a webinar on AERB Safety Guide was organized for nuclear facilities.

Apart from effective regulatory controls in place, AERB primarily focuses on enhancing awareness amongst stakeholders on safe use of ionizing radiation sources/generators. Towards this, AERB organized awareness programmes for a wide variety of audience with specific objective of spreading the importance of radiation safety. AERB and NABL jointly organized awareness program for Service Agencies of Diagnostic X-ray equipment at Mumbai to sensitize the Service Agencies towards their proposed compliance with requirements of ISO/IEC 17025: 2017.

Public Outreach Activities

As a part of its continued efforts to reach out to the general public, AERB conducted on-line webinar on 'Societal Benefits of Radiation Technology and Safety Aspects' for institutions of Higher education, Medical institutes, Hospitals and Professional Associations located in and around Chandigarh. Chairman, AERB addresses the participants and highlighted the substantial benefits accrued from application of radiation in medical, industries, agriculture and food



Shri G. Nageswara Rao, Chairman AERB delivering the inaugural address during webinar

preservation.

Developed Malayalam and Assamese language version of AERB radio jingles on licensing requirements for medical X-ray equipment. The jingles were uploaded on AERB website, and also communicated to professional Associations in Kerala and Assam State Chapters for further dissemination.

AERB provides information to its stakeholders through various means like publication of Annual Report, quarterly e-newsletter, press releases / briefings etc.

AERB participated in the Pride of India (PoI) exhibition held during 107th Indian Science Congress held at Bengaluru in January 2020, the exhibits on safety and regulatory aspects of nuclear and radiation facilities were displayed in the conference.

Apart from above mentioned activities, AERB provided timely response to queries posted by the members of public.



AERB Exhibition Stall at Indian Science Congress

The details of AERB initiatives for engaging with stakeholders and public accountability are presented in Chapter- 8 and 9.

International Cooperation

India has ratified several international conventions related to nuclear safety and security. AERB participates in activities related to these conventions as required. AERB also actively participates and contributes in multi-lateral international activities related to nuclear and radiological safety organized by IAEA and NEA.

AERB has bilateral cooperation arrangement with the regulatory bodies of several countries for information exchange and experience sharing related to regulation of nuclear and radiation safety. A bilateral MoU was

signed between AERB and the Vietnam Agency for Radiation and Nuclear Safety (VARANS) for exchange of technical information and cooperation in the regulation of radiation protection and nuclear safety.

The 17th bilateral meeting between AERB and United States Nuclear Regulatory Commission (USNRC) was held at USNRC's headquarters at Rockville, Maryland, USA. Areas of common interest like emergency preparedness and response for nuclear power plants, licensing approaches for new NPP's, regulation of radiotherapy facilities, management of disused sealed radioactive sources were discussed.



Participants of the bilateral meeting along with team leaders Mr. S. B. Chafle, AERB and Mr. Raymond Furstenau, USNRC

AERB and Canadian Nuclear Safety Commission (CNSC) conducted a bilateral meeting through video conferencing on November 23, 2020. Discussions were held on regulatory oversight of nuclear facilities during the COVID-19 pandemic, safety issues specific to PHWR type of reactors, public confidence in the safety of nuclear power and the associated challenges for new sites for nuclear power plants.

Commissioner, USNRC, along with three delegates visited AERB on February 18, 2020 and held meeting with AERB Senior Management. Areas of common interest like addressing lessons from accident at Fukushima Daiichi NPP in the regulatory requirements and guidance documents, regulatory acceptance of commercially available digital I&C systems and cyber security related issues were briefly discussed in the meeting.

Chairman, AERB, participated in the 48th Meeting of the IAEA's Commission on Safety

Standards (CSS) through virtual mode and shared status and actions by AERB for providing Continuity of Safety / Regulatory Monitoring of Nuclear and Radiation Facilities in India during the COVID-19 pandemic.

On invitation from India, IAEA, had conducted an Integrated Regulatory Review Service (IRRS) in India, for Nuclear Power Plants in the year 2015. An extended follow-up mission with enhanced scope, to include 'Radiation Source Facilities and Activities' was to be conducted in 2020. A preparatory meeting was conducted during July 21-23, 2020 through video conferencing. The meeting was attended by IRRS team leaders, Senior Management of AERB and Senior Representative of DAE. Owing to COVID-19 pandemic, the Mission is being rescheduled by IAEA.

AERB's contribution at various international fora are presented in detail in Chapter-10.



AERB-USNRC Meeting

Human Resource Development and Infrastructure

AERB is in the process of augmenting its manpower. This year AERB has inducted postgraduates through AERB Graduate Fellowship Scheme (AGFS) in IIT Bombay and IIT Madras and through training schools of BARC and IGCAR. As on December 31, 2020, in position strength is 344 comprising of Scientific &

Technical and supporting staff of Administration /Accounts.

As a part of competence enhancement, AERB continued to train its staff by organising training programmes, management development programmes (MDP), workshops, refresher courses, technical talks, colloquia and depute officers for on-job training at nuclear and radiation facilities.



AERB Officers and Faculty of MDP at YASHADA, Pune

During the year, three colloquia were organized on different topics and commenced a four months' training course on Nuclear Power Plant Containment Safety for AERB/NPCIL officers in mix mode (physical and virtual).

The functioning of AERB during COVID-19 pandemic required seamless management of all Information and Computer Technology (I&CT) services and upgradation of associated resources. To meet the requirements in special situations, AERB enhanced IT systems by configuring email accounts of AERB users with to forward their emails to National Informatics Centre (NIC) server accessible to users working from home. Also implemented new web conferencing on-premise system (TrueConf) for conduct of meetings. AERB started an in-house development of software applications for database management. e-Office modules were upgraded to incorporate changes to improve the features and performance.

Construction of ERRC building at Kolkata is completed and construction of new building (NB-C) in Niyamak Bhavan campus is in progress.

The details on human resources development and infrastructure and staff welfare activities are presented in Chapter-11.



ERRC, Kolkata

Official Language Implementation

AERB conducted various programmes as a part of the actions towards implementation of official language 'Hindi', in various official works. DAE incentive scheme for working in Hindi has been introduced and employees are actively participating in the scheme. Total 10,532 letters were sent in bilingual form.

A workshop on 'Hindi Quarterly Progress Report and Record Management', was organised



Shri G. Nageswara Rao, Chairman, AERB addressing the Hindi Day Celebration through video conferencing

towards enabling the AERB personnel to record and manage the data required for various divisional reports.

AERB celebrated 'Hindi Day' by organising virtual function on behalf of Joint Official Language Coordination Committee (JOLCC).

The details on Official Language Implementation are presented in Chapter-12.

Finance

AERB receives funds from GoI for meeting its expenditure both capital and revenue. Central Government allocates the budget under separate head of accounts of AERB. Annual expenditure during the year 2020 was Rs.78.87 crores.

The details on Finance is presented in Chapter-13.

Conclusion

Throughout the year, AERB has carried out its core regulatory activities through safety

surveillance by safety review and assessment, regulatory inspection and developing regulatory documents for stakeholders. AERB met the challenges posed by COVID-19 and performed its mandated activities effectively. AERB actively participated and contributed in several multilateral international platforms working for promotion of nuclear and radiological safety in facilities /activities across the globe. Organised several safety promotional activities for stakeholders and awareness programmes for public.

Acknowledgement

AERB appreciates the efforts of individuals who have contributed in preparation of Annual Report 2020 by way of providing inputs, compilation of the report and the editorial team for review and bringing the report to present shape.

FUNCTIONING OF AERB DURING COVID-19 PANDEMIC

Since the later part of March 2020, after the Government announced the COVID-19 lockdown, AERB has been functioning for fulfilling the regulatory responsibilities, primarily through telework (work from home), while few officers functioned from the office as per requirements. The staff of AERB were provided with official e-mail access at their homes, with VPN based network access to selected personnel, to meet the regulatory responsibilities. AERB has started functioning from office since May 2020, with progressively increasing staff presence, as per the COVID protection Guidelines issued by the Government from time to time.

Since September 2020, AERB has been functioning with almost all the staff attending office, with staggered timings for ensuring the physical distancing at workplace. For ensuring COVID protection while working from office, AERB has devised Standard Operating Procedures (SOP) and most of the officers and staff continued remain protected from COVID. Steps were also taken for creating awareness and to follow the social distancing norms as per the SOP. Further steps were taken for periodic

disinfection of office space and to provide regular and adequate supply of hand sanitizer for the staff.

In the current phase the regular on-site inspections are not being taken up. However, the SOTs posted at the NPP sites continued to function and send their observations to support the safety monitoring. Further AERB has devised an appropriate remote inspection process to ensure continuity in regulatory oversight of nuclear and radiation facilities. The Remote inspection facility is currently functional at HQ.

Chairman, AERB, Executive Director, AERB and many other officers of AERB participated in the meetings of IAEA including the General Conference, meeting of the Commission on Safety Standards, and other meetings of IAEA and NEA through video conferencing.

AERB has implemented an On-premise Web Conferencing System (Trueconf) in July 2020 to aid conducting web-based virtual meetings and conducted number of meeting which includes the Board meeting, safety committee meetings and webinars.



Coronavirus Prevention