

**Routine inspection of fire hydrants, isolation valves, and water/foam monitors:** Monthly routine inspection, preventive maintenance, cleaning, oiling, checking for smooth valve operation of 79 fire hydrants, 30 isolation valves, and 20 water/foam monitors, spread all over the technical area of RRCAT are being carried out. A monthly report of these works was prepared and corrective measures were taken.

**Preparation of various safety reports:** Regular coordination and data collection from Administration, Medical Centre, Security, CISF, and other Sections/Divisions on various aspects of industrial safety and reporting to the regulator was done in the form of “Quarterly Status Report of RRCAT on Safety, Health and Environment, Industrial Hygiene Surveillance Report, Industrial Safety Award Report, Plant Accidents details report, etc”. These reports include data on injury statistics of different categories of employees including contractor workers, number of reportable injuries (both fatal & non-fatal), man days lost, frequency rate (FR), severity rate (SR) and injury index (II), fire incidents, significant events and dangerous occurrences as per Factory Act, 1948.

**Radiation safety:** Radiation surveillance was provided to all radiation facilities to ensure radiation safety of staff and workers. During the period of Jan. – June, 2023 radiological surveillance was provided during the operation of the synchrotron radiation facilities and their beam lines. Induced radioactivity measurement on accelerator components and performance check of area radiation monitors & survey meters were carried out during Indus shutdown. Detailed radiation measurements were carried out at H<sup>+</sup> ion source (RF based) within the shielded vault at H<sup>+</sup> ion building and the recommendations were made to plug the glass viewing windows (with SS flange or lead glass) through which low energy x-rays were streaming out. Personal dosimetry for 499 workers (including temporary) of RRCAT was carried out during the period. The biometric data of 24 new radiation workers was uploaded on National Occupational Dose Registry System. From the dose data (of first quarter), the maximum individual dose recorded is 0.15 mSv, which is well within acceptable limit. Quarterly testing of various equipment /instruments of Radiation Emergency Response Centre was carried out and kept in a preparedness state for responding to any radiological emergency. Elementary training on radiations protection were imparted to 182 users of synchrotron radiation source of Indus-1 and Indus-2. The environmental radiation monitoring data from 11 locations of RRCAT campus and ARPF site indicated no increase in radiation level due to operation of the radiation facilities.

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### N.8: Fire safety activities at RRCAT

Fire activities group of Fire and Safety Section (FSS), RRCAT is involved in fire fighting during fire emergencies. Along with

this, they are also conducting first-aid fire fighting training program and fire safety awareness program. Different fire safety activities were carried out to meet the said objectives.

**Live demonstration during National Science Day 2023:** The Fire and Safety Section organized a science exhibit during the National Science Day Celebration in RRCAT, Indore on 25<sup>th</sup> & 26<sup>th</sup> February 2023. During this event, different types of fire safety equipment like Fire Entry Suit-3000 Series, Fire Proximity Suit-750 Series, Water Turbine based Smoke Extractor, Fire-fighting Hose with water branch, Aqueous Film Forming Foam (AFFF) Compound, DCP type Fire Extinguishers, CO<sub>2</sub> type Fire Extinguishers, Portable Fire Pumps, Breathing Apparatus Sets, Breathing Apparatus Compressor, etc. were displayed.



*Fire fighting demonstration on National Science Day-2023.*

Students from different schools were briefed about their operations and applications for mitigating the emergencies. A live operation of the High Expansion Foam Generator was also demonstrated, the foam discharge of this generator is 02 lakh liters per minute. Various types of fire-fighting water branches with different patterns of the water jet, donning & doffing of breathing apparatus set, and Multi-purpose Fire Tender with high-pressure hose reels, water monitors & remote controlled Light Mast were also demonstrated. The event was conducted at RRCAT Fire Station. Visitors from various schools, and colleges along with RRCAT colony residents and their relatives participated in this program.

**Periodic training for fire fighting equipment and breathing apparatus set:** Fire and Safety Section is regularly conducting training on fire-fighting and the breathing apparatus set. This monthly training program is imparted to RRCAT employees, using the latest training aids along with power point presentations, safety video clips and short movies, Hands-on experience with fire extinguishers & B.A. sets. During this period, total of 99 RRCAT employees were trained. Fire mock drills were also conducted in RRCAT technical area, which includes the Free Electron Laser (FEL) building and Indus Complex. A fire hazard analysis including fire load density & smoke filling calculation for the Indus Complex including MPS & RF hall was also conducted. A drive to control fire in the grass area of the unoccupied technical area was also

initiated and results remained successful, as during the summer season a few incidences of small fire in this area could be contained and controlled safely.



*Training on fire fighting for employees.*

In the month of January-2023, the recruitment for driver cum pump operator cum fireman was initiated through different levels of examination, which include medical test, written test, physical endurance test (PET) and vehicle driving test. For this recruitment, physical endurance test (PET) and vehicle driving test was organized by FSS.

*Observance of National Fire Service Week-2023:* Fire and Safety Section observed National Fire Service Week-2023 from 14<sup>th</sup> April to 20<sup>th</sup> April 2023. During this week, Martyr's Day on 14<sup>th</sup> April was observed in the presence of Dr. Shankar V. Nakhe Director, RRCAT, and other dignitaries at the Fire Station. A week-long program for RRCAT employees like a fire quiz competition, slogan competition, poster competition, and essay competition (Hindi and English) on the fire safety topic "Awareness in Fire Safety for Growth of National Infrastructure (AGNI)", basic fire-fighting training to AECS school children, Lecture on fire safety in Hindi, Screening of movie "The Tower" (in Hindi) based on fire disaster in the 108 stories tower sky building, etc. were successfully organized in RRCAT. On 20<sup>th</sup> April 2023, a prize distribution ceremony followed by a live fire safety demonstration by fire staff including high-rise building emergency and rescue operations, operation amidst the fire flames wearing fire entry suit was organized at RRCAT Fire Station.

Shri Purushottam Shrivastava, Chairman, Apex Safety Committee was the Chief Guest of this function. This event was presided by Dr. K. S. Bindra, Director, Laser Group & Outstanding Scientist. About 300 officials of RRCAT observed the fire safety demonstration.



*Fire safety demonstration during National Fire Safety Week-2023.*



*Prize distribution ceremony during National Fire Service Week-2023.*

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### **N.9: Activities of RRCAT Staff Club**

RRCAT Staff Club is working under the aegis of RRCAT to promote sports and cultural activities to its members and their families. In addition to regular on-going activities, several events have been organized during the period January to June 2023.

RRCAT Staff Club successfully conducted 37<sup>th</sup> DAE Sports and Cultural Meet of Basket-ball during 13<sup>th</sup> to 17<sup>th</sup> February, 2023. A total of 88 participants from eight group teams of DAE units participated in the meet. The meet was commenced with beautiful inaugural function on 13<sup>th</sup> February, 2023. Mrs. Savita Kharadkar (Former International Basket-ball player) was Chief Guest for the inaugural function. The inaugural function was chaired by Dr. Shankar V. Nakhe, Director, RRCAT.



*Inauguration of newly constructed Basket-ball court by Mrs. Savita Kharadkar near In-door Sports Complex.*