

N.3: Strengthening safety, health and environment practices at RRCAT

Ensuring a safe, healthy, and compliant workplace continues to be a core priority at RRCAT, given the presence of advanced accelerator, laser, and industrial facilities across the campus. Fire & Safety Section undertook several significant initiatives focused on statutory compliance, data-driven safety management, occupational health, inspections, training, and emergency preparedness.

Online Data-Driven Safety Management System: Fire & Safety Section adopted a structured, data-driven approach to strengthen Safety, Health & Environment (SHE) performance across RRCAT. Fire & Safety Section in coordination with Computer Division implemented an online Fire & Industrial Safety management system that integrates Yearly RRCAT safety review compliances, Quarterly status reports on Safety, Health & environment, Industrial hygiene surveillance reports, Fire call reports, Fire & Injury statistics reports, issuance of height passes etc. from various stakeholders. This digital initiative aims to enhance efficiency, accuracy, and accessibility of safety data, supporting the broader digital transformation of SHE management. Comprehensive data covering injury statistics, hazardous job activities (such as work at height, rotating and lifting machinery, high-voltage systems, and chemical handling), industrial hygiene monitoring, biological surveillance, work permit systems and emergency preparedness were compiled and analysed. Based on this analysis, the following key institutional reports were prepared on behalf of RRCAT & sent for compliance to AERB: (i) Quarterly Status Reports on Safety, Health & Environment (ii) Industrial Hygiene Surveillance Report (iii) Plant Accident Details Report (iv) Safety Management System (SMS) Report



Sr.	Report Name	Quarterly	Final Report (Download)	Status
1.	Quarterly Status Report on Safety, Health & Environment (SHE)	Quarterly	Final Report (Download)	Status
	Qtr-4 (Oct-Dec)	Timeline: 01-Jan-2026 to 31-Jan-2026	Download	Completed on 16-Feb-2026
	Qtr-3 (Jul-Sep)	Timeline: 01-Oct-2025 to 31-Oct-2025	Download	Completed on 13-Nov-2025
	Qtr-2 (Apr-Jun)	Timeline: 01-Jul-2025 to 31-Aug-2025	Download	Completed on 30-Sep-2025
2.	Yearly Report on Industrial Hygiene Surveillance (IHSR) - AERB	Yearly	Final Report (Download)	Status
	Yearly (Jan-Dec)	Timeline: 01-Jan-2026 to 31-Dec-2026	Pending	
3.	Industrial Safety Management System Report - 2025 at RRCAT	Yearly	Final Report (Download)	Status
	Yearly (Jan-Dec)	Timeline: 01-Jan-2026 to 31-Dec-2026	Pending	

Fire & Safety report management system

Internal Safety Inspections and Statutory Compliance: Members of Fire & Safety Section actively participated in Internal Safety Inspections. Inspections were conducted across various divisions to verify compliance with safe work practices and statutory provisions under AEFR-1996 and the Factories Act-1948. Workplace conditions including Fire safety, housekeeping, machine safety, electrical safety, emergency arrangements, noise levels, and illumination were assessed to ensure adherence to permissible standards. Observations and recommendations were communicated to concerned divisions for timely corrective actions. In addition, safety inspections were also carried out at the newly upcoming NEG coating facility at unoccupied area and at locations outside the RRCAT premises.

Occupational Health and Work-at-Height Safety: To mitigate risks associated with work at elevated locations, physical fitness tests for employees and contract workers were conducted prior to issuing "Height Passes." This ensured that only medically fit personnel were authorized for work at height. In coordination with the Certifying Surgeon, RRCAT, regular occupational health check-ups were conducted for employees, contract workers, and food handlers. These health surveillance activities enabled early identification of occupational health risks and strengthened preventive healthcare measures.

Training, Awareness, and Outreach: Fire & Safety Section actively contributed to a wide range of training and awareness programmes throughout the year. Industrial Safety lectures were delivered for employees and trainees, including a lecture at PC-94 jointly organized by ATI, Mumbai and RRCAT. A training programme for AERB officers was conducted at RRCAT during 25–28 November 2025 which focused on RRCAT's accelerator and high-power laser facilities and associated safety aspects.

Electrical Safety and Fire-Fighting Training: As part of National Electrical Safety Week-2025, RRCAT organized a one-day Electrical Safety Lecture Series. The programme was inaugurated by Shri Jishnu Dwivedi, Director, TDSG, who emphasized integrating safety into all professional activities. Expert speakers covered high-voltage safety, electrical hazards, control system safety, substation practices, pulsed power systems, and electrical fire prevention.

To strengthen fire safety awareness and hands-on preparedness, comprehensive fire-fighting training was imparted to 445 RRCAT and contract employees during 2025. The programme included lectures with audio-visual aids and practical training on fire extinguishers, breathing apparatus sets, hoses, and water branches at the Fire Station.



Fire-fighting training

Industrial Safety Management Programme: A One-Day Lecture Series on Industrial Safety Management was conducted on 8th October 2025. The programme was inaugurated by Shri Jishnu Dwivedi, Director, TDSG, who urged participants to adopt safety as a core professional responsibility. Expert sessions addressed crane and load-handling safety, disaster management, laser safety, construction hazards, machine safety, fire detection and alarm systems, and emergency first aid, supported by practical demonstrations.



Electrical safety lecture series at RRCAT

Professional Participation and Achievements: Shri Ajay Kumar, Dy. Chief Fire Officer, and Shri Shailendra Kumar Shukla, Scientific Assistant, participated in the 41st Safety and Occupational Health Professionals Meet (SOHPM) held at Ahmedabad from 17–19 December 2025 under the banner of IPR Gandhinagar and AERB. Shri Shailendra Kumar Shukla secured First Prize in English Slogan at the All-India DAE level, while Shri Ajay Kumar received consolation prizes in both English and Hindi Slogan competitions.



RRCAT officers at 41st SOHPM, Ahmedabad

Emergency Preparedness and Institutional Support: Members of Fire & Safety Section attended refresher training on National Radiation Emergency Preparedness as part of the Radiation Emergency Response Team to maintain readiness for radiological emergencies. Safety inspections were conducted for exhibits prior to public access during National Science Day - 2025. A week-long programme was organized during National Fire Service Week - 2025, including Martyr's Day observance, slogan, essay, and fire quiz competitions.

Joint Mock Drill and Accident Management: A joint mock drill under the On-Site Emergency Plan was conducted on 30th December 2025 at the Indus User Building, simulating an earthquake with mass casualties and fire. Multiple agencies including Indore Fire Service, Indore Police, BDS, CISF, RRCAT Fire and Medical Services participated. The exercise was successfully conducted under the command of the Incident Commander, with valuable feedback provided by the umpire.



Mock-drill for accident management

In the event of any accident, investigations were carried out as per the established SOP through a constituted committee. The Fire & Safety Section personally interacted with injured personnel and recommended remedial measures to prevent recurrence.

*Reported by:
Prateek Bhatnagar (prateek@rrcat.gov.in)*