सत्यमेव जयते

INTEGRATED MANAGEMENT SYSTEM
OF
ATOMIC ENERGY REGULATORY BOARD

MARCH 2025

"We the staff and employees of AERB, having solemnly resolved to abide by the provisions of the Integrated Management System (IMS), hereby adopt this IMS'

IMS developed through participation of all the employees was approved by the Board of AERB for implementation on February 14, 2025

DOCUMENT CONTROL SHEET

Title	**Integrated Management System of Atomic Energy Regulatory Board**
Document number	AERB/IMS (Issue-01)
Approved by	The Board of AERB on February 14, 2025
This is the first regular version of the governing IMS document	
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AMENDMENT SHEET

Date	Changes made (including: chapter, section and para number)	Approval (Name, Designation and Sign)

FOREWORD

The attributes of safety governance evolved in the formative years of Indian nuclear programme were inherited by Atomic Energy Regulatory Board (AERB) and continued to be part of its regulatory system. Although there was no formally adopted management system, AERB's regulatory practices were broadly in conformity with the international quality management standards.

In the year 2006, AERB chose to adopt Quality Standard of ISO: 9000. Later, around 2013, while conducting self-assessment of regulatory infrastructure for safety, as part of preparation for IAEA's Integrated Regulatory Review Service (IRRS) mission, a need was felt to integrate various regulatory and management processes of AERB. AERB initially contemplated developing interfaces between various processes so as to integrate them under Integrated Management System (IMS) following approach given in IAEA's GS-R-3. However, as Quality Management System (QMS) and certification under ISO 9000 through internal audit and external scrutiny was well established in AERB, it continued to remain in vogue with preliminary efforts initiated towards development of IMS. In 2015, during peer review mission, the IRRS team observed the above status and recommended that "The AERB should finalize and fully implement its integrated management system (IMS), based on IAEA GS-R-3". In the year 2016, IAEA published the GSR Part 2 on "Leadership and Management for Safety" which superseded the GS-R-3. However, this document was also more focussed to regulated facilities than the IMS of regulatory bodies.

Taking into account of these developments, in 2016, AERB took concerted and focussed efforts towards planning and establishing IMS in AERB. AERB developed its own document customised for AERB's functioning based on its experience and value judgment. It integrated the functioning of AERB into one complete framework, enabling it to work as a single unit with unified objectives. The first trial version of IMS was implemented in AERB with due approval of the Board in 2018. Consequently, AERB withdrew its ISO-QMS programme. The basic premise on which ISO-QMS programme is founded is customer satisfaction (and customer gets defined as licensee as per ISO in our case), which after detailed deliberation was found not suited with the mission and mandate of AERB.

Based on experience gained and challenges faced during implementation of the initial version, IMS was revised in 2021 by rearranging contents and incorporating some additions for more coherent operation of various processes.

On the basis of trial use of the previous versions, a need was felt for restructuring of IMS to reflect the understanding evolved on fundamental concepts for designing and developing the IMS. With this maturity an approach for revision of IMS was presented to the Board and with due approval of the Board, comprehensive revision was taken up. In a nutshell the revision focussed more on continuity than change, some updation based on evolved understanding; some addition to fill the observed gaps; and to bring more clarity through better explanation; to provide necessary flexibility to cater to anticipated circumstances and demands. The

conceptual framework on which IMS has been restructured is given in the following para. The framework takes into account the relevant inputs of IAEA documents appropriately viz. General Safety Guide No. GSG-12 “Organization, Management and Staffing of the Regulatory Body for Safety” and GSG-13 “Functions and Processes of the Regulatory Body for Safety”.

Around the mandate assigned to AERB by Government and statutes, AERB expresses its foundational aims as its “mission statement” and its aspirations, strategic goals and plans for the future as its “vision statement”. Thereafter, tying together its mission mandate, vision and values, AERB formulated its “Organisational policies” and “Organisational strategies”. Next, to fulfil its mandate effectively, AERB identified all the functions it needs to perform and also the processes (regulatory as well as management, which was not explicitly addressed in the earlier versions) through which these processes are to be performed. For carrying out the identified functions, a hierarchical organisational framework is adopted with clearly defined roles, responsibilities and authority. The framework provides flexibility for establishing divisional structure based on facilities and activities to be regulated and the corresponding identified functions and processes, as on date, and also to cater to demand for change due to developing circumstances/future demand. After establishing the organisational structure, various levels of organisation are empowered through appropriate assignment of authority according to the established decision-making guidelines (regulatory as well as managerial), following graded approach.

As IMS concerns all employees of AERB, the proposed changes in IMS were done in an inclusive manner with participation of all its employees. For this purpose, a dedicated space in AERB’s intranet portal was created. The revised chapters of governing document, now named as ‘IMS of AERB’ were uploaded progressively. Comments (around 1900) obtained were appropriately reflected in the final document.

It gives me a great satisfaction to see the overwhelming participation of AERB employees in collectively deciding on how AERB will function in the coming days. Therefore, it was befitting to have a preamble in the revised IMS stating ‘we the staff and employees of AERB, having solemnly resolved to abide by the provisions of the IMS, hereby adopt this IMS’

With due approval of the Board on the 14th February, 2025, the IMS of AERB is hereby issued for regular use in AERB.

(Dinesh Kumar Shukla)

CONTENTS

Chapter-1 Introduction

1.1 Background & Overview of IMS

1.1.1 The Indian regulatory system witnessed concurrent development of technology and regulation, with the strong backing of a long-term R&D programme.

1.1.2 In the initial years, the regulatory framework for safety in the nuclear programme in India had evolved naturally in conjunction with the development of the programme itself. Safety regulation of the facilities, mainly the research reactors, was essentially based on the principle of self-regulation, wherein the responsibility for safety was placed on the facilities themselves.

1.1.3 Gradually, the need for a separate mechanism for overseeing how the facilities are fulfilling their responsibility for safety in their activities was realized, which led to the evolution of a multi-tier safety review committee structure. Subsequently, as the nuclear power programme was expanding, a strong need was felt for having a separate body for discharging the regulatory roles and responsibilities.

1.1.4 Accordingly, Atomic Energy Regulatory Board (AERB) was constituted in November 1983 to carry out certain regulatory and safety functions under the Atomic Energy Act, 1962 with the Department of Atomic Energy (DAE) providing the necessary administrative support.

1.1.5 The attributes of safety governance evolved in the initial days such as the plant management having prime responsibility for safety, participation of the plant representatives in the safety review process, learning from operating experience, both domestic and international, etc., have been inherited by AERB which continue to be part of its regulatory system.

1.1.6 Starting with a humble beginning with a handful of people in 1983, AERB's staff strength has grown multi-fold to over three hundred in the last forty years. To cater to the expanding span of facilities and activities, besides Head Quarters at Mumbai, AERB has established its Regional Regulatory Centres at New Delhi, Chennai and Kolkata and a R&D division (SRI) at Kalpakkam. With time, the interfaces with various agencies requiring effective co-ordination and co-operation on cross-cutting regulatory issues were progressively established.

1.1.7 For a grown up and progressively evolving organisation responsible to regulate a large number and wide range of facilities and activities, having interfaces with multiple organisations, it is appropriate to integrate and formalize the good practices and systems evolved over the years, so that they continue in the intended manner and improved continually. For this, an Integrated Management System (IMS) is developed and implemented in AERB.

1.1.8 The functioning of AERB is integrated into one complete framework, enabling it to work as a single unit with unified objectives in the form of Integrated Management System (IMS). It is developed with the participation of all employees of AERB**.**

1.1.9 As a regulatory body, AERB carries out various regulatory and safety functions such as specifying regulatory requirements and providing guidance to meet these requirements, granting licences to facilities and activities, carrying out regulatory oversight through regular safety reviews & assessment and inspections, monitoring compliance, taking enforcement actions as necessary, and confirming satisfactory states of emergency preparedness and response. In addition, AERB carries out as well as promotes safety and regulatory research and interacts with relevant agencies at national and international level, disseminates information to keep public informed on relevant safety issues and carries out safety promotion activities. The IMS of AERB brings all the multiple, interrelated and interacting processes required for the above functions into single framework.

1.1.10 The purpose of integrated management system is:-

- to improve the efficiency and effectiveness of the processes through planning, control and supervision;
- to establish that leadership for safety is demonstrated at all levels in the management hierarchy.

1.1.11 To achieve the above, the important considerations in IMS are:-

- grading of the application of management which allows to deploy resources and extent of controls in an optimal manner with focus on safety.
- decision making levels, support for decision making and assigning authority to decision makers with clearly defined roles, responsibilities and accountability.

1.1.12 The mandate of AERB assigned by the Government vide its constitution order (S.O. 4772), has been expanded by various Acts/Rules/Orders. Around the mandate, AERB expresses its foundational aim as its “mission statement”. The “mission statement” concisely communicates AERB’s primary focus. Further, AERB expresses its aspirations, strategic goals and plans for the future as its “vision statement”.

1.1.13 Thereafter, tying together its mandate, mission, vision and values, AERB formulated its “Organisational policies” and “Organisational strategies”. Policy statements reflect the basic principles/protocols for guiding its activities including decision making, strategies reflect plan of actions/approaches for implementation. To fulfil its mandate effectively, AERB identifies all the functions it needs to perform and also the processes (core and supporting) through which these functions are to be performed. Further, the strategic directions and guidance (in form of protocol, criteria and guidelines) for effective planning and executing these processes are also provided, which address specific elements of organisational policies and strategies.

1.1.14 For carrying out the identified functions, a hierarchical organisational framework is adopted with clearly defined roles, responsibilities and authority which helps in assessing accountability at each level. Some of the important management processes are performed under direct supervision of the Head of the Department (Chairperson, AERB). The framework provides flexibility for establishing directorates and divisional structure based on the facilities and activities to be regulated and the identified functions and processes as on date and also to cater to changes required to address future requirement.

1.1.15 After establishing the organisational structure, various levels of organisation are empowered through appropriate assignment of authority according to the established decision making guidelines (regulatory as well as managerial), following graded approach. A pictorial depiction of how IMS is conceptualised is shown in Figure-1.

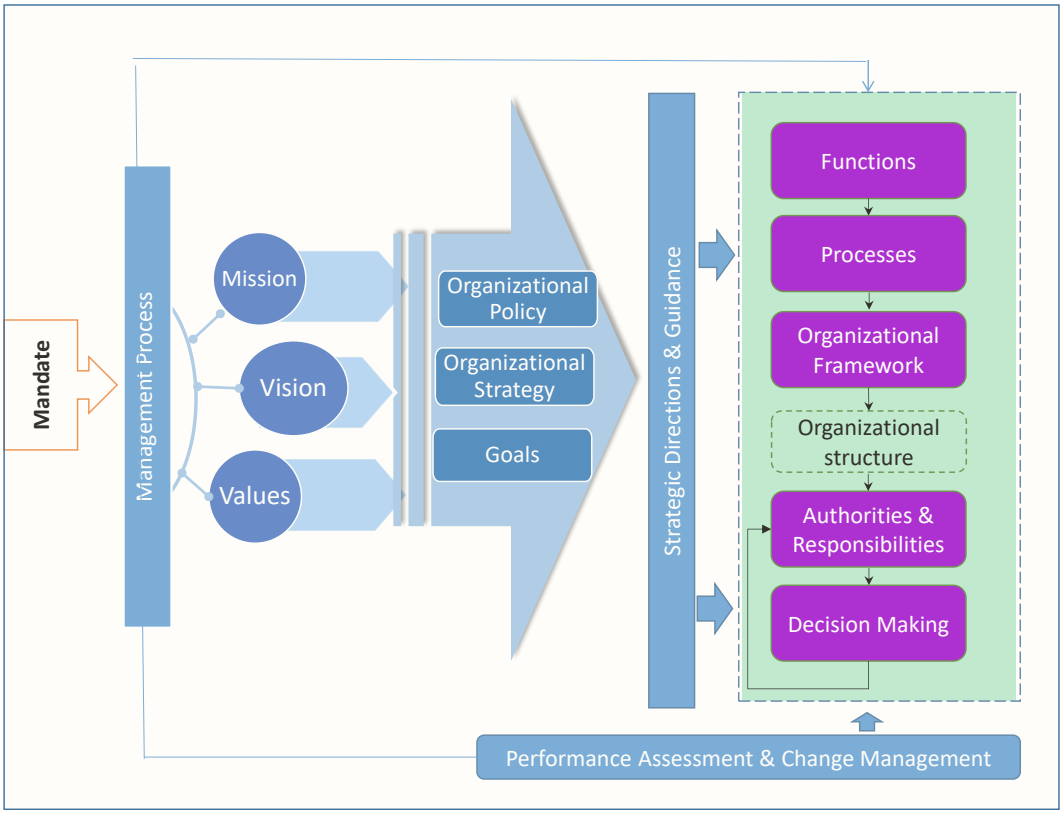


Figure-1: Overview of IMS

1.1.16 AERB's management system is implemented through a governing document supported by a series of easily understandable documents arranged in three levels of hierarchy. This structure of information promotes clarity and avoids repetition by establishing the amount of information and the level of detail appropriate to each type of document, and by using cross-references between specific documents at the different levels. The structure of IMS documents adopted in AERB consists of:

- **IMS of AERB:** It is the governing document (i.e. this document) for establishing IMS in AERB. It provides an overview of how integrated management system is designed for effective functioning of AERB. It contains the organisational policies, strategies and identifies all the functions and the necessary processes through which these functions are performed. For carrying out the identified functions, it provides for adoption of a hierarchical organisational framework with flexibility for establishing directorates at hierarchy Level-2 and divisional structure at hierarchy Level-3 aligned with functions and processes. It describes overall functioning of AERB including approach for decision making. The assignment of decision making authority (regulatory as well as managerial) to various levels in the organisation is also covered. The information contained here is AERB management's primary means of communicating to its employees the expectations of management and the approach for fulfilling its mandate effectively. Implementation of IMS is supported by three levels of documents.

Strategies, Strategic Directions & Guidance	○ **Level-1(A) and Level-1(B):** IMS of AERB requires strategic directions and guidance to be issued, which may also be in the form of regulatory strategy, protocol, criteria, guidelines, etc. These are to be taken into account while planning and implementation of processes. The generic strategies, strategic directions and guidance are covered in Level-1(A) while process specific strategies, strategic directions and guidance are covered in Level-1(B).
Process	○ **Level 2 (RP):** It contains the description of the regulatory processes identified in IMS and developed taking into account the strategies, strategic directions and guidance provided in Level 1(A) and Level 1(B). It contains specific details on the activities to be performed. The information contained here provides an overview of the process map with the interactions between processes and responsible agencies. These documents can be either issued collectively or separately for Core Regulatory Processes, Support Regulatory Processes. For Administrative Support Processes, generally Level-3 procedures may suffice. ○ **Level 2 (MP):** It contains the description of the management processes along with specific details on the activities to be performed.
Procedures & Instructions	○ **Level 3:** It contains the detailed procedures, instructions and guidance that enable the processes as described in Level 2 to be carried out in the identified division, especially by individuals or by small functional groups or teams. It covers procedures, work-plans, checklists, etc. (Need of Level 3 document is decided on case to case basis and based on coverage in Level 2).

1.2 **Objective**

1.2.1 The objective of this document is to provide clear understanding on how AERB has established IMS in order to have in place both the core processes that help it to perform its core functions, and the management and support processes that are necessary to run the organisation, in an effective and efficient manner.

1.2.2 The document is also intended to help the existing employees, the newcomers as well as all interested parties to understand how AERB functions.

1.3 **Scope**

1.3.1 This document covers the organisational and management aspects of AERB for regulation of nuclear and radiation safety in the country (including those aspects of security which have bearing on safety) and industrial safety in units of DAE. In doing so, it integrates not only the technical aspects but also the cultural, organisational and human aspects for enhanced regulatory effectiveness.

1.3.2 This document is applicable to all employees of the Secretariat of AERB, individual external experts and members of AERB committees/specialist groups/ expert groups. The functioning of the Board of AERB is governed by the "Transaction of Business of the Board".

1.4 **Structure**

1.4.1 The IMS of AERB which is the governing document (i.e. this document) for establishing IMS in AERB contains seven chapters. Chapter 1 is on Introduction that provides an overview of the background on implementation of Integrated Management System, the objective, the scope and the structure of the document. The Chapter 2 covers the consolidated mandate of AERB and its characteristics. Chapter 3 elaborates the management functions of AERB, its missions, visions, core values, the organisational policies, the organisational strategies to meet policy statements. It provides for setting of goals and issuance of strategic directions and guidance by Top Management. This chapter also enumerates the management processes to be developed for effective discharge of the management functions and provides for development of IMS implementation supporting documents for the management processes. Chapter 4 provides the details of the core regulatory functions, functions to support the core regulatory functions and the administration function to support the organisation. It also enlists the associated processes to carry out these functions and provides for development of IMS implementation supporting documents for these processes. Chapter 5 covers the basic principles and considerations that govern the development of 'organisational framework' and adaptation of 'organisational structure', key elements towards achieving organisational excellence, the interface between the Board and the Secretariat and the distribution of roles and responsibilities in the secretariat. Chapter 6 addresses the overall functioning and decision making (both regulatory as well as management processes related) covering the philosophy and principles behind assignment of authority to various levels in the secretariat, the recording of decisions and communication of decisions. Chapter 7 summarizes

the steps involved in evaluation of the effectiveness of IMS through self-assessments, internal and external audits and review and implementation of corrective actions for continual improvement.

1.4.2 The document concludes with an Appendix (which is used for elaboration and is considered a part of the document and placed after the last section in the main body of the document). Appendix provides the tabulated depiction of decision making by the Board and Secretariat of AERB along with review levels.

1.4.3 There are four annexures attached to this document. Annexures provide information that might be helpful to the user and are placed after 'Appendices' as they do not form a part of the document. Annexure-I summarizes the basis of legal authority of AERB for carrying out its regulatory mandate as well as 'citizen-centric administration' responsibilities. Annexure-II provides the typical list for IMS implementation supporting documents and Annexure-III describes the historical account of implementation of IMS in AERB. Annexure IV provides the current organizational structure.

Notes:

1. *The term 'Licensee' is used in this document to indicate the person or organisation responsible for a licensed facility or a licensed activity who has been granted written licence by AERB to conduct specified activities.*

2. *'Interested parties' for AERB means its stakeholders and all those who have a specific concern in the activities and performance of AERB or who might be adversely affected by the decisions of AERB and include*
   - *The general public including those who live near nuclear facilities and those who benefit from the use of ionizing radiation or nuclear energy;*
   - *Organisations and individuals who have legitimate interests in the impacts (including economic) of establishing and operating a nuclear or radiation facility such as owners, manufacturer, designer, technologies developers, operators, partners, customers and other supply chain entities;*
   - *Occupational workers who work in nuclear and radiation facilities and the trade unions;*
   - *Elected representatives and the authorities those who govern at the national, regional or local level;*
   - *Professional and academic institutions;*
   - *Media who convey information to others, and the nongovernmental organisations that represent the views of many individuals.*

3. *The term 'safety' is used in this document to mean the protection of people and the environment against radiation risks, and the safety of facilities and activities that give rise to radiation risks. Safety as used here includes the safety of nuclear installations, radiation safety, the safety of radioactive waste management and safety in the transport of radioactive material; it also includes non-radiation-related aspects of safety like industrial safety as applicable. Additionally, nuclear security aspects having bearing on safety are also considered. Internal arrangements are in place to ensure the integration of safety and security aspects and management of their interfaces.*

4. *Unless there is anything conflicting or inconsistent in the subject or context-*
   - *words imparting the masculine gender shall be taken to include females; and*
   - *words in the singular shall include the plural, and vice versa.*

Chapter-2

Mandate and Characteristics of AERB

2.1 Mandate

2.1.1 Atomic Energy Regulatory Board (AERB) was constituted by Statutory Order S.O.4772 dated November 15, 1983, notified in the Gazette of India December 31, 1983 to carry out certain regulatory and safety functions under Section 16, 17 and 23 of the Atomic Energy Act, 1962.

2.1.2 Prior to 1983, the Safety Review Committee of DAE (DAE-SRC) was entrusted with the responsibility of regulatory oversight of the units of DAE while the Division of Radiological Protection (DRP) of Bhabha Atomic Research Centre (BARC) was looking after safety regulation of non-DAE units engaged in radiation applications. These bodies continued to assist AERB in its functioning after its formation.

2.1.3 In 1987, a Committee was constituted by Chairman, Atomic Energy Commission vide Officer Order No.18/1/9/85-ER/823 dated 21.3.1987 to review the functions and responsibilities of the AERB vis-à-vis DAE-SRC, DRP and Health Physics Division of BARC and to recommend measures for furthering the effectiveness of the regulatory functions of AERB. Consequent to the acceptance of Committee's report, DAE-SRC started reporting to Chairperson, AERB through partial modification of office order constituting AERB. With this, the DAE-SRC was subsumed in AERB and the functions of DAE-SRC also became a part of AERB.

2.1.4 Prior to 2001, most of the regulatory activities with respect to safety assessment and issuance of authorisations to the users of radioactive material were carried out by Radiological Physics & Advisory Division (RP&AD) (erstwhile DRP), BARC. From 2001, the regulatory activities were transferred to AERB in accordance to the mutually agreed working arrangement. Based on a series of meetings between BARC and AERB, it was agreed upon that

a) AERB shall handle all correspondences with the applicants regarding licensing
b) AERB would seek assistance from RP&AD and other agencies for safety assessment of the sources, equipment or shielding adequacy of installations and layout plan approvals or for handling emergencies, wherever necessary
c) RP&AD, BARC will continue to conduct training courses in coordination with AERB.

Thus, interactions between RP&AD and AERB over the years had converged to establish a single window communication among users, with regulatory functions and enforcement function entrusted to AERB.

2.1.5 In June 2000, the regulation of BARC facilities were exempted from the scope of AERB vide an executive order. Further S.O 2865 dated October 26, 2004 mandated that regulatory and safety functions of all projects/facilities/plants based on technologies developed by BARC, which would be eventually operated by organisations other than BARC, shall be carried out by AERB from design stage onwards on the basis of specific requests from Director, BARC from time to time.

2.1.6 From October 2005, it was decided that in view of duality of enforcement of industrial safety in mines of DAE by AERB and Directorate General of Mines Safety (DGMS), industrial safety in mines would no longer be regulated by AERB. Likewise, road accidents in industry premises and DAE townships were also kept outside the purview of AERB.

2.1.7 Pursuant to the communication from Atomic Energy Commission (AEC) in September 2002, AERB undertook a step by step process for developing necessary strategies and interfaces towards integrating security and safety aspects. Subsequently from October 2009, AERB started formally overseeing those aspects of security which have a bearing on safety under its regulatory regime.

2.1.8 The Civil Liability for Nuclear Damage (CLND) Act, 2010 mandated AERB to notify nuclear incidents depending on the gravity of the threat and risk involved.

2.1.9 As per the constitution order of AERB, AERB has the powers of the Competent Authority to enforce rules and regulations framed under the Atomic Energy Act, 1962 for radiation safety in the country and authority to administer the provisions of the Factories Act, 1948 for industrial safety in the units under the control of DAE. Chairperson, AERB has been designated as the Competent Authority under the following rules promulgated under the Atomic Energy Act, 1962.

i) Atomic Energy (Radiation Protection) Rules, 2004
ii) Atomic Energy (Safe Disposal of Radioactive Wastes) Rules, 1987
iii) Atomic Energy (Working of Mines, Minerals and Handling of Prescribed Substance) Rules, 1984

2.1.10 Besides, AERB has also been vested with certain powers and functions under the Environment Protection Act, 1986; Manufacture, Import Storage of Hazardous Chemical Rules, 1989, National Disaster Management Plan framed under Disaster Management Act, 2005, and Atomic Minerals Concession Rules, 2016. Please see Annexure-I for further details on legal mandate.

2.1.11 Based on the above chronological developments, the mandate of AERB progressively evolved over the years and the consolidated functions of AERB are summarized in Table-1.

Notes:

1. *There are two aspects of regulations: Regulations for exercising Control over an activity and Regulations for the purpose of Safety. In case of former, the regulation is meant for exercising governance control by deciding what is to be prohibited or permitted, which is based on national policies, strategic requirements, international relations, public welfare,*

etc., and, if permitted then who should be allowed to carry out the activity, which is based on assessment of organisational capabilities such as resources, infrastructure, etc. The Safety Regulation, on other hand, concerns with the obligations to be met to ensure that permitted activity is carried out in a safe manner (such as safety requirements in design and operation, training, safety gadgets, etc.). With regard to nuclear industry, under the Atomic Energy Act, the control authority to exercise governance control is DAE, whereas authority to regulate safety is AERB. Prior inputs on safety aspects may be obtained by DAE from AERB, if felt necessary, for exercising control under the Act. Under Environment Protection Act, Ministry of Environment, Forest & Climate Change (MoEF&CC) is the concerned agency for regulating w.r.t. environment protection aspects. MoEF&CC conducts public hearing for nuclear projects under EPA, 1986. However, for radiation facilities, while the safety is regulated by AERB, the control authority is the respective Line Ministry. Establishing a proper liaison with various Line Ministries is essential for effective and efficient regulatory framework.

[Example: Central Drugs Standard Control Organisation (CDSCO) is the designated agency under the Medical Devices Rules, 2017 responsible for regulating the manufacturer and suppliers. AERB No-Objection Certificate (NOC)/type approval from radiological considerations is a pre-requisite for issuance of license by CDSCO to manufacturers/suppliers.]

2. *All Acts, Rules and Notifications referred in this document are available on AERB website under menu Acts & Regulations.*
3. *AERB honours the national and international obligations and maintains high level of transparency and accountability in its functioning by fulfilling its citizen centric administration mandate. For detailed legal mandate, please refer Annexure-I.*

2.2 Characteristics of AERB

The foundational aim of AERB is to assure the safety of various facilities and activities under its purview at all times. In order to effectively achieve this objective, AERB has inculcated certain characteristics, within its legal mandate and authority which are described below:

Independence

2.2.1 The mandate of AERB and its functional separation from the entities having interests which may conflict with safety, ensure effective regulatory independence. AERB, the national nuclear and radiation safety regulator, has been constituted by the President of India specifically for exercising certain regulatory and safety functions envisaged under the Atomic Energy Act, 1962 and various rules thereof. The Chairperson, AERB is the 'competent authority' under various rules on safety, promulgated as per the provisions of the Atomic Energy Act, 1962.

2.2.2 The executive functions of the AERB are vested in Chairperson, AERB, who exercises full powers of the Head of a Department under the Delegation of Financial Power Rules, Supplementary Rules. General Financial Rules, General Provident Fund Rules, Contributory Provident Fund Rules, Treasury Rules and other relevant orders issued from time to time. Chairperson, AERB is empowered to delegate such of his powers as are re-delegatable to any of the officers in the AERB Secretariat.

2.2.3 The DAE provides the necessary administrative support to the AERB in regard to its budget, parliamentary work and establishment and accounts matters. For this, formal Working Arrangement between DAE and AERB exists. The arrangement provides for :

a) support in interfacing with Atomic Energy Commission;
b) support on budgetary matters to AERB;
c) support in processing of manpower requirements of AERB;
d) secretarial support w.r.t interfacing with PMO, other Ministries and external agencies;
e) legal and administrative support w.r.t legal matters;
f) Support for obtaining governmental approvals related to international cooperation and international deputations related to safety matters warranting AERB representation;
g) Support in coordination with law enforcement authorities for investigation of sources involving radioactive sources;
h) Sharing of information on security aspects on nuclear and radiation facilities;
i) Sharing of information on future projects of DAE.

2.2.4 AERB is functionally independent for its regulatory decision making and is responsible to Atomic Energy Commission (AEC). AEC is the apex body of the Central Government for matters concerning atomic energy and has full administrative and financial powers of Government of India within the budget provisions, approved by the Parliament. The Chairman AEC, in his capacity as Secretary to Government of India in the Department of Atomic Energy, is responsible to the Prime Minister (as Minister In-Charge) for arriving at decisions on technical questions and advising Government on matters of atomic policy.

2.2.5 Funding for AERB activities is provided by Government of India. AERB has full powers to operate its budget, which it prepares and submits to the Central Government for approval.

2.2.6 Department of Atomic Energy provides support in budgetary matters and includes AERB's financial requirements separately for obtaining budgetary sanctions through AEC and allocation of the approved budget to AERB in separate head of account. The allocated budget of AERB is adequate to fulfil its regulatory functions. The legal and financial provisions are so structured as to accord effective functional separation to AERB while carrying out safety regulation in India.

2.2.7 Since its inception, AERB has been a knowledge organisation and has core competencies across the spectrum commensurate with the nuclear power programme of India and ever widening use of radiation applications throughout the country. The in-house competence of AERB is further augmented by technical support from BARC and other premier R&D institutions. The technical support is utilized primarily through structured framework of various committees/expert groups and projects in the form of recommendations / suggestions. Based on these inputs, the decisions are taken by AERB in an

objective manner. The management of conflict of interest in utilisation of the technical support is catered through administrative measures/ undertakings. AERB follows inclusive, participative, non-intrusive yet independent regulation.

Safety Focus

2.2.8 AERB recognizes that technological tools alone are not adequate to deliver safety and that it is indispensable to augment the same with an optimized framework of organisational tools and human aspects. It is this realisation which has manifested in the evolution of a culture of safety as an indispensable organisational trait in AERB. The processes to cater for desired organisational climate in AERB, identify and encompass those traits of human aspects which have a bearing on organisational culture.

2.2.9 AERB embeds its priority for safety in all its activities and fosters and sustains a strong safety culture through leadership and management for safety.

2.2.10 AERB management system has internal process for promotion and sustenance of safety culture through continual self-assessment. Senior management sets out personal example to have a positive bias for safety in their decision making and advocates a common understanding of safety culture across AERB.

Accountability

2.2.11 AERB is accountable to general public and constantly strives to meet their expectation. Being responsible to Atomic Energy Commission (AEC), AERB presents its report to the Commission periodically. AERB's performance is periodically monitored through CAG audits and PAC review and the findings are placed before Parliament. Appeals against the decisions of AERB lie with the AEC, whose decision on the matter is final.

2.2.12 Optimisation of resources is carried out ensuring the effectiveness of the processes and regulatory actions are taken timely. AERB, as national regulator, observes various governmental measures for optimisation of resources.

2.2.13 AERB engages with interested parties and maintains effective communication and consultation with them to gauge their aspirations / concerns and address the same in a professional and timely manner. AERB acts with integrity and learns from any feedback on its actions, both from interested parties and its own assessment. AERB is responsive to change, whether in the form of technological advancements or societal aspirations and is resilient in unexpected situations.

2.2.14 AERB recognizes that the prime responsibility for safety rests with the licensee and ensures that licensee is aware of this and regulatory actions do not diminish this prime responsibility of licensee.

Transparency and Credibility

2.2.15 AERB ensures that regulatory requirements are applied in a consistent, predictable, transparent and balanced manner which is commensurate with the associated radiation risks.

2.2.16 AERB is transparent and consistent in its actions and shares information and ideas with interested parties to help ensure the highest standards of safety, while giving due account to the protection of 'controlled' information such as information of sensitive or classified in nature, proprietary, trade secret, commercial confidence, etc.. Transparency and openness towards the interested parties also enhances confidence and trust in AERB.

2.2.17 In accordance with its mandate, AERB undertakes steps necessary to keep the public informed on any major issue of radiological safety significance through various communication channels. Special emphasis is placed on awareness of public living in the vicinity of operating stations and upcoming projects.

2.2.18 Formal sharing of information with any member of the public on request is a statutory responsibility of AERB under the 'Right to Information' Act, 2005. AERB promptly responds to the queries put forth by the Members of the Parliament along with the substantiating information, as necessary.

2.2.19 AERB has established a consistent visual identity through communication channels, accessible information and proactive engagement with interested parties. For high level of credibility, AERB gives focus to enhancing its visibility as a regulator through its actions as well as through upholding the tenets of competence, clarity in regulations, fairness in decision making and transparency.

Resilience

2.2.20 Resilience is the ability to respond to organisational demands or uncertainties or changes (both foreseen and unforeseen). The resilience of an organisation grows on its capacity for adaptability and foresight; and how the organisational framework enables the implementation of related aspects.

2.2.21 AERB has undergone an organic growth underpinned by continually enhancing its regulatory approaches and organisational structure. It has adopted strategies that foster flexibility in its functioning so as to cater to future demands and adapt to unforeseen challenges effectively. For this, AERB has laid profound emphasis on balancing knowledge based and rule based approaches. Further, continual improvement programme based on implementation of corrective measures from self-assessment, regulatory experience feedback, internal and external audits helps in preparing AERB to face existing as well as future challenges. This dynamic approach enables AERB to navigate complex challenges, demonstrating its resilience while the management system provides the necessary flexibility to cope up with demanding situations resulting from advancement of technologies, expectations of interested parties, work-disruption due to unavoidable circumstances.

Table-1: Consolidated Functions of AERB

Areas	Functions
Development and Revision of Regulations and Guidance (REGDOCs, Safety Directives, etc.)	Develop Safety Policies, Safety Codes/ Standards, nuclear security requirements, and supporting documents in nuclear, radiation and industrial safety areas for facilities and activities under its purview.
	Prescribe limits of radiation exposure to occupational workers and members of the public, specify dose constraints and acceptable limits of environmental releases of radioactive substances.
Licensing of Radioactive Substances/Equipment Containing Radioactive Substances	Issue NOC from safety considerations for import and export of radioactive substances/ equipment containing radioactive Substances.
	Exercise regulatory control over manufacture, possession and use of radioactive substances/equipment containing Radioactive Substances from Safety and Security considerations (including exemption of radioactive substances).
	Grant Type Approval of the design of the sealed radioactive substances/equipment containing radioactive substances from radiological safety considerations for the purpose of manufacture and supply.
	Approval of package design and grant of shipment approval.
	Grant authorisation for transfer/disposal from safety considerations.
Licensing of Radiation Generating Equipment	Issue NOC from safety considerations for import and export of radiation generating equipment.
	Exercise regulatory control over operation of radiation generating equipment from Safety considerations (including exemption).
	Grant Type approval of the design of the equipment from radiological safety considerations for the purpose of manufacture and supply, after satisfying compliance to safety codes and standards, as applicable
Licensing of Plants/facilities	Grant of licenses/consents during various stages of the life time of the plant and renewal of operating license after satisfying the compliance with the established regulations.
Licensing of Personnel	Approve designation of personnel as required under various Acts /Rules/Regulations (RSO, operating personnel and appointment of competent persons as per Factories Rules, etc.). Review the training program, qualifications and licensing policies for personnel of nuclear and radiation facilities and prescribe the syllabi for training of personnel in safety aspects at all levels.
Safety Review and Assessment	Review and Assessment from safety (radiation safety and industrial safety in DAE units) and those aspects of security having bearing on safety of applications and associated submissions. Review and assessment during siting, construction, commissioning, operation and decommissioning of units under its purview including modifications in design/operation involving changes in the technical specification, safety performance of plants/facilities, events, impact on workers and environment, etc.
Inspection	Carry out regulatory inspection from safety and security aspects and to carry out investigation following a safety related event.
Enforcement	Issue directives, order suspension of operation or cancel or revoke the issued licence or lodge complaint for initiating penal action.
Monitoring of Emergency Preparedness & Response	Review off site emergency preparedness plans and approve on site emergency preparedness plans of nuclear and radiation facility.

Operating and Regulatory Experience Feedback	Review and analyse operating and regulatory experience feedback obtained from national and international sources (ICRP, IAEA, NEA, bilateral arrangements etc.).
Safety Promotion	Undertake safety promotional activities for enhancing and encouraging safety consciousness among licensee organisation.
Promoting Transparency/ Openness and Accountability	Keep interested parties informed on major issues of safety significance.
	Engage /consult with interested parties, as appropriate, during conduct of regulatory activities.
	Collecting the views and feedback of interested parties and arrange prompt grievance redressal.
Promote Safety Research	Promote research and development efforts in the areas of safety.
International and National Cooperation	Maintain liaison with statutory bodies and other agencies in the country as well as abroad regarding safety matters.
Notifying nuclear incident	Review of Extraordinary Nuclear Events, notify and cause wide publicity of "nuclear incident" under Civil Liability for Nuclear Damage Act, 2010.
Appoint persons/ Recognize Agencies	Appoint persons/ Recognize Agencies for carrying out safety functions as entrusted to them.

Chapter-3

Management Functions & Processes

(Mission, Vision, Core Values, Organisational Policies & Strategies, Goals, Strategic Directions & Guidance)

3.1 Management Functions

3.1.1 Management functions are necessary to enable AERB to sustain an effective (including efficient) organisation with sufficient competent staff. The management functions aim to secure a conducive climate and culture for the effective implementation of regulatory functions and processes (described in Chapter-4), which is achieved by establishing, applying, sustaining and continuously improving an Integrated Management System to ensure safety of all regulated facilities and activities. The Integrated Management System, inter alia, provides for:

- Keeping mission, vision, values, organisational policies and strategies of AERB, updated, as necessary, to reflect the changes and developments in the legal system, the regulatory experience feedback (domestic as well as international) and expectations of the interested parties.
- Setting goals through interactive and participative process and prioritize them.
- Adaptation of an appropriately structured and staffed regulatory body with sufficient competence and resources to fulfil the regulatory functions.
- Providing strategic directions and guidance for effective planning and implementation of management and regulatory processes including implementation of 'management by exception' approach.
- Nurturing effective safety leadership that seeks to continuously improve safety awareness and safety culture across the organisation.
- Managing organisational change in response to internal and/ or external factors and to minimize the risks to performance while also considering operating experience and developments within the country as well as globally.

3.1.2 To discharge the management functions effectively, AERB has identified various management processes. A 'process' is the entirety of interrelated and interacting activities. Interrelated activities include activities from other processes also (interface). A single function can be realised through single or multiple processes.

3.1.3 The management functions and associated processes have been established at AERB over the years following the best practices of management while ensuring that 'safety' is pursued as a 'value' in all the processes and activities.

3.1.4 AERB demonstrates leadership and management for safety at all levels by establishing its mission, vision, values and integrating them with the organisational Policies and Strategies. These were developed and are maintained considering the performance of regulatory activities as well as

national and international expectations and are aligned with the regulatory mandate. Based on these, goals and priorities are set and strategic directions and guidance are provided for carrying out the regulatory processes. These are communicated throughout AERB and also to interested parties in order to foster transparency and trustworthiness.

Mission

3.1.5 To ensure the use of ionizing radiation and nuclear energy in India does not cause undue risk to the health of people and the environment**.**

Vision

3.1.6 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.

Core Value

3.1.7 AERB has adopted a formal code of ethics comprising of fundamental principles and core values. This code is followed by all employees in discharge of their duties in accordance with the mission of AERB. In adherence to the core values encompassing Duty, Competence, Objectivity, Integrity, Honesty, Courage, Fairness and Respect, as stated in code of ethics, the AERB professionals commit to make a positive contribution to ensure and continually enhance safety in the use of nuclear energy and application of ionizing radiations for societal benefits in India. The personal attributes which guide the functioning of AERB's staff and employees are as follows:

i) Maintain high degree of honesty and integrity;

ii) Have competence to make clear, balanced and unbiased decisions, based on factual information and sound judgment without being influenced by competing and conflicting interest, be accountable for those decisions and demonstrate strong values and ethics;

iii) Encourage a continuous self-improvement and learning culture;

iv) Have courage to make hard decisions, as necessary, using all relevant facts and information to promote wise and fair decisions;

v) Be respectful to all, peers, subordinates and licensees, and treat all individuals with dignity and courtesy.

Organisational Policies

3.1.8 In order to achieve the Mission and Vision, the organisational policies are framed as clearly written statements to help employees to understand the organisation's views and values on specific areas. These overarching policies provide principles and general direction for functioning of AERB.

3.1.9 The important organisational policies of AERB are as follows:

(1) Adopt interactive and participative approach for setting goals; making regulatory and management policies; providing strategic directions and guidance for approach to be adopted/position to be taken concerning emerging regulatory / management issues/ gap areas.

(2) Keep safety of people and environment as its primary focus.

(3) Develop and maintain regulations commensurate with safety significance.

(4) Balance rule based and knowledge based safety and consider Human, Organisational and Technical (HOT) factors in an integrated manner following a systemic approach.

(5) Practice inclusive, participative regulation with emphasis on positively influencing the licensee for compliance and resort to enforcement judiciously.

(6) Ensure independence, consistency and fairness in regulatory decision making by AERB and be open, transparent and accountable.

(7) Ensure that regulatory activities do not diminish licensees' prime responsibility for safety.

(8) Apply legal and regulatory standards equitably and impartially.

(9) Conduct state-of-art safety analysis and research, as necessary, for independent verification in support of decision making and development of regulations.

(10) Ensure effective and efficient utilisation of resources with focus on safety priority.

(11) Employ competent staff and maintain technical competence at its core along with other regulatory and associated competencies.

(12) Ensure high degree of employee engagement for workplace excellence.

(13) Ensure managers at all levels of AERB demonstrate, by their own behavior, leadership for safety and commitment to safety.

(14) Promote the highest level of safety and security consciousness;

(15) Develop and maintain strong safety culture within AERB and influence/encourage/enforce licensees to develop and maintain strong safety culture in their organisations.

(16) Maintain records;

(17) Follow AERB code of ethics in discharging duties.

Organisational Strategies

3.1.10 The Organisational Strategies are developed to establish approaches and mechanisms for implementation of organisational policies to ensure desired functioning to fulfil its mission, vision and mandate. Overarching strategy is to develop an IMS by effective integration of all the regulatory and management processes and coordination among interdependent processes with defined ownership (roles, responsibilities, authorities, resources) for implementation of processes. Emphasis is on comprehensive in-house work which goes through inclusive and participative review process culminating in consistent and fair recommendations to AERB for taking decisions. The major

elements of the strategy addressing organisation policy statements (some are common to all statements and some are specific to some statements) are:

i) Identify the core regulatory processes and support regulatory processes, management processes, administrative support processes along with their respective guiding policy elements, strategies and management expectations of these processes (i.e. strategic directions and guidance) based on which the detailed processes (including management of interfaces) are to be planned and executed.

ii) Devise a mechanism for establishment of multi-tier safety review system, its functioning, assessment and interaction with the secretariat (according to policy of inclusive and participative approach).

iii) Strengthen in-house safety review mechanism and its interaction with multi-tier safety review system.

iv) Provide generic as well as process specific strategic directions and guidance (in form of strategy, criteria, protocol and guidelines) for planning and execution of processes.

v) Develop an approach for the Policy/Decision making (both regulatory as well as management processes related) covering the philosophy and guiding principles for assignment of authority to various levels in the secretariat, the recording of decisions and communication of decisions.

vi) Develop an organisational framework of AERB for setting up organisational structure covering ownership of all identified processes, organisational climate and culture management, the interface between the Board and the Secretariat and the distribution of roles, responsibilities and authorities in the secretariat.

vii) Leverage the advances made in digital/information technologies (including AI) for continual enhancement of efficiency of all activities of AERB. Continue centralized regulatory oversight by Head Quarters from comprehensive review consideration, supported by Regional Regulatory Centres (RRCs). Implement and strengthen centralized Record and Information Management (RIM) System with secured access to RRCs towards progressively expanding the work scope of RRCs.

viii) Establish mechanism for execution, coordination, monitoring of work related to functioning of AERB as per IMS.

ix) Establish mechanisms for IMS documents monitoring, continual improvement, and their control.

Goals

3.1.11 Participative goals setting on sliding time scale is done by Top Management through interactive and participative process aligned with its vision, organisational policies and strategies. These goals can be short term or long term, and realised through annual targets, plans and programmes. The goals are subjected to regular review and revision, as necessary, depending on changes and developments at national & international level, expectations of the interested parties and taking into account regulatory experience feedback.

Strategic Directions and Guidance

3.1.12 Strategic Directions and Guidance are provided by Top Management for effective development, planning and implementation of regulatory and

management processes. These may be generic in nature concerned with generic functioning common to various activities as well as process specific. Strategic directions and guidance are issued for application of graded approach in safety regulation, capturing and utilizing regulatory experience feedback, systemic approach for considering HOT factors, protocols for communication within AERB and with external entities, development and revision of regulations and guidance, comprehensive Human Resource (HR) and Knowledge Management (KM) plan, engagement with interested parties for effective communication and consultation, etc.

3.2 Management Processes

Policy Making

3.2.1 Through this process, Top Management develops and maintains the policies, which are necessary for discharging the regulatory mandate. The policies focus on outcomes, are evidence based, take account of national and international expectations, and align with other regulatory and government policies. This process also provides for assessment of practical implementation of policies, communication to the staff and periodic evaluation.

Process Management

3.2.2 This process manages all processes identified in chapter-4 to ensure they are systematically and consistently developed, implemented and maintained in a controlled and integrated fashion. The process, among other things, provides for process documentation, documents and records generated by the process and resource implications for each process.

Performance Management

3.2.3 This process evaluates the effectiveness and efficiency of AERB's functioning by providing performance assessment methodologies and corrective action plans, as necessary.

Governance

3.2.4 This process provides the strategic direction and oversight of AERB to ensure it fulfils its regulatory mandate consistent with the expectations of interested parties. Through this process Mission, Vision and Values, Strategic Directions, Programmes, Plans and Priorities, described in this Chapter, are framed and updated. The process is also used for budgeting, developing organisational structure, allocating roles and responsibilities and formulation of evaluation reports.

Planning

3.2.5 This process establishes and maintains a strategic plan supported by detailed operational work plans to optimize planned activities, delivery timelines and the use of resources, in order to achieve the desired regulatory outcomes. Through this process strategic plan and detailed work plans are worked out and allocation of necessary resources is carried out.

Management of Change

3.2.6 This process manages change/s in response to external or internal initiatives and to minimize the risks to performance. This process includes implementation plan for proportionate change with monitoring scheme and success criteria. It also caters for the evaluation of the assessment of the effectiveness of the change.

3. 3 IMS documentation for implementation of Management Process

3.3.1 Based on this IMS document and applicable strategic directions and guidance in Level-1 (A) and Level-1 (B) documents, Level-2 (MP) and Level-3 (MP) documents are developed for each management process for their effective execution.

Note:

'Top Management' refers to Chairperson, AERB. He is supported by internal interactive and participative mechanism and consultative mechanism involving external experts.

Chapter-4

Regulatory Functions & Associated Processes

4.0 Introduction

4.0.1 AERB has been mandated to carry out certain regulatory and safety functions as per its constitution order. Subsequently, some more functions were added to the mandate through various Acts, Rules and Orders.

4.0.2 To discharge these functions effectively, AERB has identified various processes. A 'process' is the entirety of interrelated and interacting activities. Interrelated activities include activities from other processes also (interface). A single function can be realised through single or multiple processes.

4.1 Functions

4.1.1 To fulfill the assigned mandate, AERB has identified the following functions, depicted pictorially in Figure-2.

- Core regulatory functions
- Functions to support the core regulatory functions
- Administration functions to support the organisation

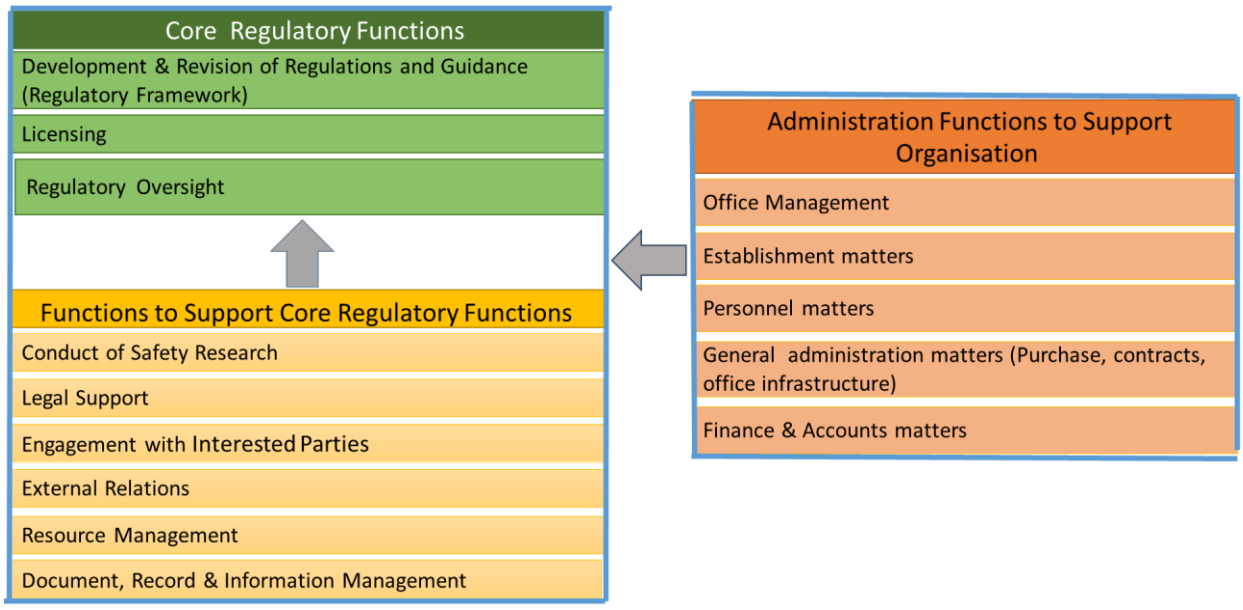


Figure-2: Functions

4.1.2 AERB has identified the following three functions as Core Functions

- Development and Revision of Regulations and Guidance (Regulatory Framework)
- Licensing
- Regulatory Oversight

4.1.3 Regulations and Guidance documents establish the regulatory framework for licensing and exercising continuous regulatory oversight throughout the lifetime of the facility and activity, which is supported through safety review, assessment and analysis, inspections, establishing arrangements and monitoring of emergency management and taking appropriate regulatory interventions / actions and/or enforcement actions, as necessary. The manner in which AERB has structured its core functions is depicted in Figure-3.

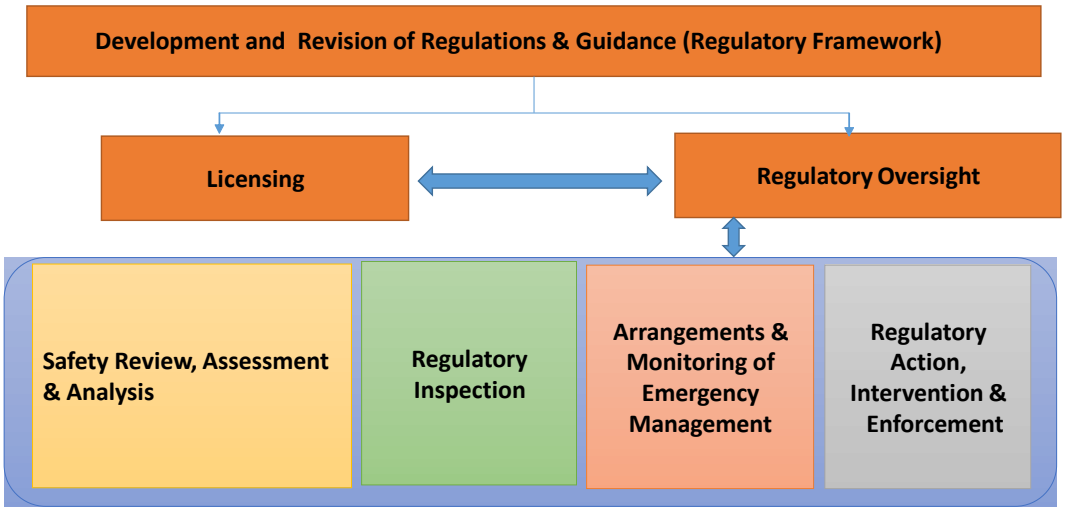


Figure-3: Arrangements for Discharge of Core Functions

Development and Revision of Regulations and Guidance (regulatory framework)

Establish and maintain a regulatory framework through regulations and guidance documents, with appropriate categorisation as per the intended purpose, that sets out

- ***safety requirements for facilities (covering the entire lifecycle) and activities;***
- ***supporting guidance for applicant, licensee and interested parties to comply with the requirements.***

4.1.4 The objective of developing regulations and guidance documents is ensuring stability and consistency of regulatory control and minimising subjectivity in decision making. Through the regulations and guidance documents, applicants/licensees and relevant interested parties are kept informed of the

objectives, principles and associated criteria for safety on which AERB's requirements, and decisions, in connection with its reviews and assessments, inspections and enforcement actions, are based.

4.1.5 While establishing a benchmark in regulatory framework, AERB is responsible for maintaining balance between prescriptive approach (rule based regulations) and flexible goal setting approach that focuses on performance, functions and outcomes (knowledge based regulations), by appropriately taking into account international standards and recommendations, obligations imposed by conventions to which India is a party, relevant industrial standards, vendor country regulations and any advances in technology. Where AERB has not specified its own safety codes/standards, it may refer or follow the relevant IAEA/other international standards / National standards.

Licensing

Grant license (in the form of licence, authorisation, registration or consent) for exercising effective regulatory control throughout the lifetime of a facility or duration of an activity in relation to safety after it assures itself that the applicant can comply with all relevant safety and regulatory requirements.

4.1.6 License is the principal means to initially apply the legal and regulatory framework and by which the responsibilities of the applicant or license holder get connected to the legal framework. For this purpose, the regulatory framework for the licensing is to be explicitly established, including the process for applying for licence (renewal/amendment/modification of licence), internal guidance on how the request will be dealt within AERB and the predefined set of documents/information to be submitted for the applicable licensing stage. The information submitted by the applicant would be used to update the records of sources, facilities and activities, as appropriate, and to decide on the level of regulatory control to be applied including the decisions for exemption.

4.1.7 The function inter alia entails conduct of safety review and assessment of submissions including independent verification and safety analysis, pre-licensing inspections to verify and ascertain the information contained in documentary submission accompanying the application and managing resident site observer teams for assessing the on-ground preparedness and readiness. Hence, the applicant is to be made aware of the review mechanism, decision making levels, licensing time period, requirements, criteria and standards forming the basis for licence and validity of licence. Supporting forms and formats including those for licensing of personnel and objects (material/equipment) and standard licensing conditions are to be developed. The decision related to licensing, including non-issuance or refusal of licence, is to be communicated to applicant and relevant interested parties along with supporting bases.

Regulatory Oversight

Maintain a sustained regulatory oversight over facilities and activities through an integrated regulatory safety assessment to ensure compliance with safety requirements, which includes safety reviews and assessment, analysis as well as observations from regulatory inspections.

4.1.8 Regulatory oversight is primarily to verify compliance to the requirements and conditions of licence. It provides major input for 'licensing' and also supports various stages of licensing process. For licensed facilities and activities, regulatory oversight ensures compliance with licence conditions throughout their lifetime.

4.1.9 Safety review and assessment is undertaken in order to enable AERB to make a decision or a series of decisions on the acceptability of the facility or activity in terms of safety and for verifying conformance/compliance to requirements and conditions of licence. It includes review, assessment of submissions, independent verification and safety analysis as well as evaluation of obligatory submissions such as periodic plant performance reports, workplace safety and environmental surveillance reports, information on events, feedback of operating experience at the national and international levels, research findings, etc.

4.1.10 The safety reviews are complemented and supplemented by periodic regulatory inspections and resident site observer teams for which written guidelines with sufficient details are made available to inspectors/observers. This may be pre-licensing inspections to verify and ascertain the information contained in documentary submission accompanying the application or inspections of licensed facilities and activities to verify adherence to licensing conditions by using standard assessment plans. Regulatory inspections are intended to make an independent check on the applicant/licensee and the state of the facility or activity, and to provide confidence that the licensee is in compliance with the safety objectives prescribed or approved by AERB.

4.1.11 The integrated regulatory safety assessment is undertaken in order to make a decision or a series of decisions on the acceptability of the facility or activity in terms of safety. (Please refer chapter-6 on functioning and decision making for more details.) AERB's regulatory oversight actions are mostly directed toward judging compliance with regulations, confirming safety margins and looking for safety trends.

4.1.12 AERB believes in positively influencing the licensee for ensuring compliance. However despite this, in the event of deviations from, or non-compliance with, regulatory requirements or with the conditions of the licenses, AERB may resort to regulatory interventions or regulatory enforcement actions, as necessary, in accordance with the policy for the use of regulatory and enforcement measures and the associated authority assigned to inspectors and other staff. For this, clear administrative procedures and guidelines governing the use and implementation of enforcement actions are first developed including provision for appeal. Regulatory enforcement actions should be based on investigation following the principles of natural justice and in accordance with graded approach. These actions are intended to ensure safety, deter non-compliance, encourage prompt identification of non-compliances, and ensuring that appropriate corrective actions are taken. Depending on the nature and gravity of violation, AERB may also resort to initiation of penal action, as per the provisions of the law.

4.1.13 Records of safety review and assessment, inspections and enforcement are to be maintained as per document control system so that these documents and records can be readily retrieved. The bases for previous decisions may also be

referred for consistency and to facilitate any reassessment made necessary by new information.

4.1.14 For effective handling of nuclear, radiological and chemical emergency, AERB is to ensure

- availability of on-site emergency arrangements;
- coordination with off-site response organisations;
- internal arrangements for emergency preparedness and response are established and maintained;
- discharge of its mandated responsibilities during emergency response.

FUNCTIONS TO SUPPORT CORE REGULATORY FUNCTIONS

Conduct of Safety Research

Conduct safety research for providing the technical basis to support its regulations and regulatory activities.

4.1.15 The conduct of research activities may either be by itself which are commensurate to its resources and infrastructure or by engaging with reputed research centres or sponsoring a research program in academic institutes. AERB may also undertake developmental work (including analysis) in support of core functions.

Legal Support

Establish necessary arrangements to have access to expert legal advice.

4.1.16 This is to ensure that regulatory requirements and decisions are not only technically sound but also conform to tenets of legal principles.

Engagement with Interested Parties

Uphold public trust and credibility by engaging with interested parties on a regular basis.

4.1.17 A communication and consultation strategy is to be developed and maintained to engage with relevant interested parties in an open and transparent manner. At the same time, an adequate level of protection of sensitive information in order to address the legitimate concerns of interested parties is to be ensured.

4.1.18 Such engagement includes keeping interested parties informed of its decisions and activities during normal and crisis situations, consultation with interested parties, collecting and capturing regulatory experience feedback in a structured manner, and arranging safety promotional events for licensees & interested parties. Additionally, AERB is to be discharging its citizen centric mandate related to enhancing transparency and accountability which includes dealing with Parliamentary Affairs, Legal & court matters, RTI applications, other requests for information /guidance, external grievance, complaints, representations & appeals, CAG audit matters, etc.

External Relations

Ensure effective and cohesive interface in dealing with cross cutting regulatory matters or gap areas, interaction with other governmental organisations.

4.1.19 The national governance framework and regulatory ecosystem is fast evolving. Apart from interfacing with DAE, which is the nodal department for all matters related to atomic energy, there is also a need to establish a proper liaison with various other Line Ministries/external agencies for effective and efficient regulatory framework. Such interactions/interfaces to address identified gaps or overlapping responsibilities may be with government ministries/departments that have responsibilities for exercising governance control over nuclear and radiation facilities or with entities and professional bodies concerning matters related to environmental protection, nuclear security, trade and transport, accreditation, emergency preparedness, medical exposure, existing exposure situation, etc. AERB may also engage with organisations to elicit scientific and technical cooperation and external support as well as may recognise experts and professional agencies to conduct functions entrusted to them. All such engagements can be effected through periodic interactions or through formal arrangements outlining each party's responsibilities, the areas of interface and the means for resolving any conflicts.

Participate in international cooperation and assistance activities in the areas of safety with a view to contribute to the enhancement of safety globally and to leverage the advances in global safety regime.

4.1.20 This may include activities connected with:

- International conventions that establish common obligations and mechanisms for ensuring protection and safety;
- Codes of conduct that promote the adoption of good practices in the relevant facilities and activities;
- multilateral and bilateral cooperation with regulatory bodies of other countries, relevant international organisations
- International peer reviews of the regulatory control and safety of facilities and activities;
- Development of internationally agreed IAEA safety standards that promote the development and application of internationally harmonized safety requirements, guides and practices;
- Serving as the national point of contact, as assigned by the Government.

Resource Management

4.1.21 ***Management of its human resources –*** formulating policies, strategies and plans for staffing, training and competence management, knowledge management, including access to library services and specialized publications.

In case needed, AERB may formulate specific requests to seek support /technical advice from external experts, from Technical Support Organisation under the established MoU or other premiere academic/research institutions. Such external support may serve as an additional input to understand and

evaluate respective safety cases. Besides, AERB may also utilise the services of individual experts on specific subject domain areas.

4.1.22 ***Formulation of budget proposals and administration of its financial resources*** - including purchase and procurement.

4.1.23 ***Maintenance and augmentation of infrastructure*** - including internal planning for infrastructure and capital projects, computer and/or data administration, ensuring adequacy of measuring and test equipment, adequate computing capability for technical use (data handling, analytical computing), as well as general uses of information technology and computer security.

Documents, Records & Information Management

4.1.24 ***Management of documents, records and information***, namely

- Control of IMS documentation: ensure that the integrated management system documents used by the regulatory body remain relevant, updated, available, understandable, unambiguous, user-friendly and readily accessible.

- Control of documents, records and information: ensure documents produced (internal and external documents, including regulatory reports, decisions, regulations and guides etc.) are comprehensive, complete, reviewed and approved based on the relevant legal requirements and office procedure and all type of records (incoming documents, outgoing documents, internal documents such as reports, protocols and notes) are collected, archived and retained for specified periods and easily identifiable and retrievable.

ADMINISTRATION FUNCTION TO SUPPORT THE ORGANISATION

Office Management

4.1.25 This includes activities related to leave management, file and dak receipts management, guidelines for noting, communication forms, channels and procedures, guidelines of drafting of communications, annual forms and returns, records management, knowledge management (as aid to successor), support in timely dealing with citizen centric mandate such as parliament matters, communications from ministers etc., court matters, lodging of complaints in police station, public grievances, Right To Information (RTI) applications, security of official information & documents, security of building premises and office infrastructure, e-office digitisation framework, observance of national events, oaths & pledges and government initiatives.

Establishment Matters

4.1.26 This includes activities related to post creation, recruitment, probation, promotion, engagement of contract labour, medical examination, domicile, concessions in appointments, staff health, welfare and recreation schemes/facilities.

Personnel Matters

4.1.27 This includes service related matters such as confirmation in service, retention in service, reemployment, seniority, termination, resignation, deputation, engagement of consultants, employment after retirement, activities related to APAR assessment, promotion, conduct of employees, personal files, handling of complaints related to employees conduct and vigilance matters, sexual harassment and disciplinary proceedings, etc.

General Administration Matters

4.1.28 This includes matters related to purchase such as procurement of goods and services, contract management, security deposits, development and maintenance of office infrastructure such as buildings, equipment, devices, appliances, communication facilities, arrangements for staff accommodation, official transport arrangements, security of staff and travel arrangements official passport and emigration, official language implementation, compensation to employees, functioning of office during declared disasters (emergency, pandemic), etc.

Finance and Accounts

4.1.29 This includes matters related to budget formulation and implementation, payment of salaries, works, procurement of goods and services, contract management, grant-in-aid and loans, maintenance of accounts, inventory management, etc..

4.2 Regulatory Processes

For effectively carrying out the core regulatory functions, functions to support core regulatory functions and administration functions to support the organisation, AERB has identified various processes. A 'process' is the entirety of interrelated and interacting activities. Interrelated activities include activities from other processes also (interface). A single function can be realised through single or multiple processes. Strategic directions and guidance such as Systemic approach for considering Human, Organisational and Technical (HOT) factors, graded approach, capturing and utilising regulatory experience feedback, internal and external communication protocols are followed while executing these processes. The processes identified by AERB are described in the following paragraphs.

CORE REGULATORY PROCESSES

Process for Development & Revision of Regulations & Guidance Documents

4.2.1 This process should ensure that the regulations and guidance provide the regulatory framework for facilities and activities and establish principles, requirements and the criteria to be used for licensing and regulatory oversight. The regulations and guidance are to be consistent and comprehensive; commensurate with the risks associated with the facilities and activities. The process should provide for consultation with interested parties, takes into account internationally agreed safety standards/benchmarks and feedback

gained from related experience. The regulations and guidance are to be made available to the interested parties and are reviewed and revised as necessary and are kept up to date.

Licensing Process

4.2.2 This process should require assurance by the applicant that it can comply with all relevant safety requirements. For this, the process should establish the complete licensing framework making the applicant aware of exemption criteria and the extent of regulatory control, the stages of licensing as well as renewal/extension, the applicable documentary submissions relevant to the licensing stage, the timeline, the licensing criteria and the basis, with sets of forms, formats for licensing of facilities, activities, objects (equipment/materials) and personnel, conditions of license, validity of licence, etc. The process should ensure that steps in licensing process are commensurate with the complexity and hazard of the facility and activity, should be understood by the parties concerned and should be predictable, may provide for pre-licensing consultation and communication of regulatory decisions along with its basis.

Safety Review & Assessment Process

4.2.3 This process should require conduct of review and assessment of information prior to grant of licence or consent and again over the lifetime of the facility or the duration of the activity. It should include safety review and assessment of technical and other information relating to safety as well as performing safety analysis in order to verify the adequacy of the proposed safety measures. The review and assessment process is a critical appraisal of information submitted by the applicant or licensee or information that comes from inspection, information on events, feedback on operating/regulatory experience at national and international levels or other specified reports relevant to the safety of the facility or activity. The process consists of examining the authorized party's submissions, and other information as required by AERB, on all aspects relating to the safety of the facility or activity, for which AERB utilises its own employees and staff and for specialised subjects, may engage external experts and consultants. Review and assessment should result in a decision on the acceptability of the safety of the facility or activity, which may be connected to a step in the licensing process. The basis for the decision should be recorded and documented in an appropriate form.

Inspection Process

4.2.4 The process should provide for formulating programme of inspection and inspection plan for individual facilities and activities, as well as managing resident site observers teams. Regulatory inspections shall cover all areas of responsibility of AERB. Provision shall be made for free access by regulatory inspectors to any facility or activity, at any time, which may be either announced or unannounced. In implementing the inspection programme, AERB should apply a graded approach in deciding the priority and frequency of inspections based on risk associated and the complexity of the facility or activity. Inspection reports should be distributed, or made available electronically to the inspected facility. Significant findings of inspections and the associated regulatory decisions are also made publicly available, through Annual Report of AERB. The process should ensure periodically evaluating the

findings of inspections and identifying generic safety issues and this information should be used to identify potential areas for improvement in the performance of licensees and regulatory processes.

Enforcement Process

4.2.5 The process should provide for taking appropriate enforcement actions in response to non-compliances with regulatory requirements and violations of licensing conditions that occur during the operation of a facility or conduct of an activity. Nevertheless, prior to operational stage, regulatory sanctions as necessary can be imposed, failure of compliance of which may result in non-consideration of application of subsequent stages. Further, decision to refuse a licence for operation in itself is a penalty akin to enforcement as refusal of an application for licence effectively means that operation of the facility or conduct of the activity is prohibited and legal sanctions can be used if the prohibition is not complied with. The process should ensure that enforcement actions cover all areas of regulatory responsibility and are taken following a graded approach as per the established enforcement policy within the legal framework. All enforcement actions along with their rationale should be recorded.

Arrangements and Monitoring of Emergency Management

4.2.6 The functions in respect of arrangements and monitoring of emergency management is conducted through combination of core regulatory processes and process to support core regulatory functions.

- The principles, requirements and associated criteria for emergency preparedness and response is specified through process for development & revision of regulations & guidance.
- The emergency plans are reviewed as part of safety review and assessment.
- The on-site and off-site emergency arrangements including interface with response organisations are verified during inspections and participating in off-site emergency exercises as part of inspection process.
- In cases of deviations or non-compliances, AERB may take appropriate actions as per enforcement process.
- Coordination mechanism with concerned entities at national level for emergency management is instituted as part of process for liaison with DAE and other Government organisations. Advice to the government and other response organisations (interested parties) is coordinated through this process. For this, internal infrastructure including software and measuring equipment for monitoring the progress of emergency situation and the response actions is maintained as part of its process of infrastructure management, and review and analysis of the monitoring results is carried out as part of safety review and assessment process.
- Communication to relevant interested parties is conducted through interested parties' engagement process.
- This process also supports AERB's function of notification of nuclear incident as mandated through CLND, Act, 2010 and causing wide publicity.

SUPPORT REGULATORY PROCESSES

Conduct of Safety Research

4.2.7 The process provides for identification of research and development needs in support of the regulatory functions and to conduct research activities by itself with the available resources at AERB or by engaging external expert organisations in participative or collaborative research activities or by sponsoring research activities in academic institutions and research centres.

Legal Support

4.2.8 The process aids in securing access to legal advice for AERB in connection with the development of regulations, regulatory judgements and decisions, enforcement actions.

Engagement with Interested Parties

4.2.9 The process provides for engaging with interested parties, informing and consulting interested parties about the possible radiation risks associated with facilities and activities, and about the processes and regulatory decisions, collecting feedback on regulatory processes, arranging safety promotional events for licensees & interested parties. AERB fulfils its citizen centric mandate related to enhancing transparency and accountability through this process.

Liaison with Government Ministries/Department (DAE and other Ministries/Departments)

4.2.10 The process helps to interface with DAE in matters concerning administration of Atomic Energy Act, 1962 and associated governance matters, identify the gap as well as overlapping areas in domain of various governmental bodies which have relation to regulation of nuclear and radiation facilities and activities for a cohesive regulatory interface. Such interface may be addressed through mutual discussions, meetings or through formal agreements.

International Cooperation

4.2.11 The process provides for leveraging the benefits from global safety regime through engaging in international cooperation activities with international agencies/bodies, complying with regulatory obligations under international conventions/commitments, participation in international peer review activities, technical cooperation under bilateral and multilateral agreements.

Human Resource Management (staffing, competence development, knowledge management, external expert support)

4.2.12 The process provides for assessment of adequacy of human resource, identification the need for augmentation of skill sets in specific areas, planning for structured recruitment of qualified staff, competence building

through systematic training and knowledge management, engagement of technical or other expert professional advice or services in specialised areas.

Infrastructure Management (civil, Information Technology, measuring and test equipment etc.)

4.2.13 The process provides for identifying the need for infrastructural requirements for office functioning and its employees including upkeep of measuring and test equipment, software etc. required for investigation or emergency monitoring.

Financial Management (budget, purchase/procurement)

4.2.14 The process provides for planning for financial resources, making budget proposals and allocation of financial resources within approved budget, managing expenditures, etc for effective discharge of regulatory activities.

Process for Control of IMS Documentation

4.2.15 The process ensures that the integrated management system documents used by AERB remain relevant, updated, available, understandable, unambiguous, user-friendly and readily accessible (by means of adequate preparation, review, approval, issue, distribution, use and revision of documents).

Process for Control of Documents, Records & Information

4.2.16 The process requires identification of the documents, records & information of AERB and that these are controlled in accordance with the requirements of the integrated management system. Further, the records include all the incoming documents as well as documents created by AERB itself. The process should ensure that relevant records are collected, processed and retained for specified periods and that the records are reliable, complete, identifiable and easily retrievable, as it forms the basis for institutional knowledge. The management and retention of records should take into account the sensitivity of the recorded information, giving due regard to confidentiality, security, distribution etc.

ADMINISTRATIVE SUPPORT PROCESSES

4.2.17 To plan and execute the functions to support organisation, following processes should be developed

- Process for office management
- Process for establishment matters
- Process for personnel matters
- Process for general administration matters
- Process for finance and accounts matters

4.3 **IMS documents for implementation of regulatory processes**

4.3.1 Based on this IMS document and applicable strategic directions and guidance in IMS Level-1 (A) and Level-1 (B) documents, IMS-Level-2 (RP) and Level-3 (RP) documents are developed for each core regulatory process, support regulatory process and administrative support process (as needed) for their effective execution.

4.4 **IMS Documents for Implementation of Regulatory Processes**

4.4.1 An indicative list of various IMS implementation supporting documents is given in Annexure-II.

Chapter-5 Organisation

5.1 This chapter describes the overall 'organisation' of activities of AERB, grouping of activities into appropriate functional blocks, their hierarchical arrangement, roles, responsibilities and commensurate authorities. Elements of organisation (structure, functional, human and technological) and aspects related to organisational climate and excellence are covered here. The workflow elements are covered in next chapter.

5.2 The basic principles and considerations that govern the development of 'organisational framework' and adaptation of 'organisational structure' that fits the activities of AERB within that framework are:

i) Flexibility to adopt organisational structure to suit different circumstances and future requirements.

ii) Taking cognizance of executive Chairperson's position as ultimate decision making authority.

iii) Designated decision making Authorities in given areas with assigned authorities commensurate with the responsibilities, within the defined boundaries of empowerment.

iv) Optimum hierarchical levels, balancing the advantages and challenges with respect to coordination and integration, resource allocation, accountability, etc.

v) Single reporting (avoiding conflict of loyalty).

vi) Organisational structure centred around the vision & mission, and organisational policies rather than individual personalities.

5.3 Based on above, AERB has developed an organisational framework that is flexible and adaptable to different circumstances and demands. The organisational framework of AERB is depicted in Figure-4.

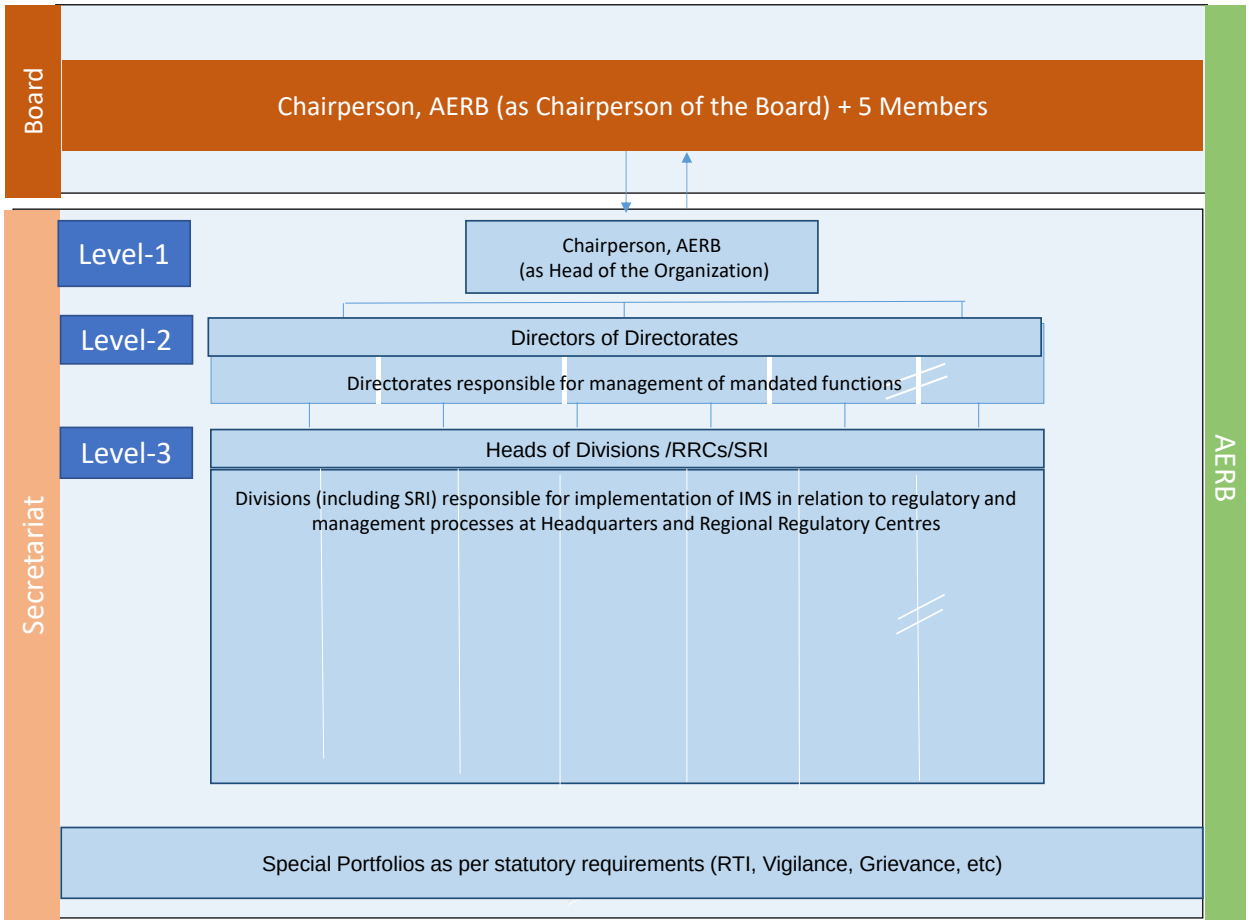


Figure-4: Organisational Framework of AERB

5.4 The organisational framework of AERB provides the interface between the Board and the Secretariat and depicts the hierarchical management structure and functional blocks under them. The Board is assisted in execution of its mandate by the Secretariat. Term 'AERB' refers to organisation as a whole (Board + Secretariat) while term 'Board' refers specifically to the Board of AERB. The Secretariat of AERB has its Offices at Head Quarters, Mumbai, Regional Regulatory Centres (RRCs) at Chennai, Kolkata and New Delhi and a R&D Division (Safety Research Institute) at Kalpakkam.

5.5 The jobs and responsibilities of the Secretariat are distributed among the functional blocks, as per the need, for execution of its functions through core regulatory processes, support regulatory processes and management processes. The divisions in the secretariat are grouped into Directorates for effective management of mandated functions.

5.6 Within the given framework, the organisational structure of AERB is developed in accordance with regulatory functions as well as the facilities and activities to be regulated. Emphasis is also given to the technical areas to be covered in execution of various regulatory and support functions. The current organisational structure along with the main responsibility of various functional blocks is given in Annexure IV of this document.

5.7 The Directorates are headed by Directors who are responsible to Chairperson, AERB. One of the Directorates in addition to execution of the allocated regulatory support and management functions, also serves as the office of the Board and extended office of Chairperson, AERB for having related records and information at one place and their effective management. The Director of this Directorate is designated as Secretary to the Board of AERB. The Director(s) of the Directorate(s) for overseeing the regulatory operations (licensing and regulatory oversight) is/are designated as Executive Director(s). The framework provides creation /rearrangement of directorates and divisions to cater to increased work load/demands.

5.8 The distribution of roles and responsibilities of different hierarchical levels in the secretariat are described later in this chapter in an integrated way and in line with the above stated organisational framework. The framework also includes special designated portfolios such as Public Information Officer, Vigilance and Grievance Officer, etc. The decision making authority associated with these levels are covered in the next chapter on 'Functioning and Decision Making'.

5.9 AERB uses an interdisciplinary approach to the oversight concept, enabling a systemic approach in which all aspects relevant to safety are adequately considered with respect to human, technical and organisational factors and their interactions. While framing the organisational structure and allocation of human resources, attention is paid to the required competences in various functional blocks.

5.10 In order to be able to act effectively and to address changing circumstances and demands that arise at any time during the different stages of the lifetime of licensed facilities, required flexibility is ensured in the internal structure and composition of various functional blocks of AERB. A process for managing organisational changes is instituted as a part of IMS management process. The process addresses aspects of flexibility and stability of organisational structure.

5.11 The roles, responsibilities and lines of communication within the organisation including interfaces of directorates and functional blocks are clearly defined in appropriate IMS document, in accordance with the organisational structure.

Organisational Excellence

5.12 The unique and distinct characteristics of AERB is that it comprises of 'knowledge workforce' having altogether a different set of expectations. The knowledge workforce derive more satisfaction from the work; they demand challenges and derive contentment in seeing results; they seek to work towards organisation's mission and desire for an enhanced participation in decision making; they strive for setting their own performance goals and continual updating of knowledge. Hence, for effective management of such knowledge driven workforce, the organisation should be able to provide a climate which can nurture them through active employee engagement and involvement programmes.

5.13 Some of the key elements that are considered towards achieving organisational excellence are:

- Arrangements to help employees understand their role and how it is aligned with mission, vision, values, organisational policies and strategies.

- Employee management by recognising the need of knowledge work force and understanding their intrinsic motivation.

- Creating work environment which helps foster the ability and desire of employees to act in empowered way.

- Arrangement(s) for fuelling creative thinking in individuals/teams and sharing their knowledge.

- Arrangement(s) for direct interactions of staff with top management with provision for making them comfortable to express their concerns or share ideas without any fear.

- Cultivating a culture of open exchange of views and ideas and providing for their fair, unbiased and equal treatment, irrespective of the hierarchical position of the staff providing the ideas/views.

- Arrangements for clear and transparent decision making process following interactive and participative approach, ensuring availability of relevant information to the top management irrespective of decision making level.

- Arrangements for cultivating culture of 'accountability' through 'ownership'.

- Arrangements for assessing 'accountability' by appropriate focus to both 'acts of omission' and 'acts of commission'.

- Arrangements for monitoring and assessing 'organisational climate' and 'safety culture'.

- Arrangements for on-boarding new employees, their placements and career progression with opportunities for career growth.

- Arrangements to provide opportunity to take new challenges through change of work or relocation in mid-career of an employee.

- Arrangement for competency management and getting external support in highly specialised areas.

- Arrangements to ensure selection of 'right' people for the 'right' job.

- Arrangements for communicating right stuff at right time by right persons.

- Arrangements for adopting new technologies for improving its functioning with focus on 'tools centred around the work' rather than 'work centred around tools'.

BOARD OF AERB

COMPOSITION

5.14 The Board comprises of six members of which two are whole time members including Chairperson. The other whole time member is the Chairperson, Safety Review Committee for Operating Plants (SARCOP) who is an ex-officio member of the Board. The remaining four members are eminent experts from various disciplines relevant to the mandate of the Board. The Board is assisted by a non-member Secretary who is an employee of the Secretariat.

FUNCTIONS

5.15 The functions of the Board are provided in S.O. 4772. The Board approves the policies governing nuclear and radiation safety in the country and industrial safety in units of DAE under its purview. The Board approves the management system and in this regard, oversees that the organisation while conducting its activities adheres to the stated vision, mission and specified mandate of AERB in an independent unbiased manner. The Board reviews the appeals against the regulatory decisions of the Secretariat.

ALLOCATION

5.16 The decision making by the Board and those allocated to Secretariat is provided in the Appendix.

TRANSACTION OF BUSINESS

5.17 Each Board member has equal authority and responsibility in all Board decisions and has equal access to all information pertaining to Board matters. The Board may constitute expert panel/advisory groups, as necessary. Transaction of business of the Board is adopted by the Board through a resolution.

5.18 The Secretariat interacts with the Board periodically (normally once in a quarter) and also places the proposals which require approval of the Board. Board oversees the safety issues and keeps itself informed of the activities performed by the Secretariat.

5.19 The Secretary provides logistic and secretarial services to support the Board and serves as the Contact Person for affairs of the Board.

5.20 Meetings of the Board, hearing of appeals, entitlements of the Members, constitution of Advisory Panels/bodies etc. are conducted as per approved procedures.

CHAIRPERSON (Hierarchical Level-1)

5.21 The Chairperson, AERB is vested with the executive functions of the Secretariat and exercises administrative and financial powers for smooth functioning of the organisation. He discharges certain responsibilities on behalf of the Board as entrusted by the Board and is responsible for overall supervision. Chairperson, AERB, by virtue of being 'Competent Authority' under various rules promulgated under the Atomic Energy Act, 1962, has additional responsibilities to be performed such as grant of licenses to regulated facilities and activities, authorisations for waste disposal, appointment of RSOs, approval of competent persons.

Responsibilities

Pertaining to Management System

- Demonstrates and adheres to high order of leadership for safety and security, and in turn, establishes the same expectation from among all senior members of AERB Secretariat fostering a strong safety culture and code of ethics.
- Establishes an integrated management system for effective conduct of various regulatory processes and management processes and associated activities that help in achieving the mission, goal and objectives of safety, health, protection of environment, security and quality.
- Monitors that the performance of AERB with respect to the processes, responsibilities, effective operation of interfaces within and with external agencies, accountabilities at different levels of authority are as per IMS. Based on such assessments at planned intervals improvements, if found necessary, in human and organisational factors, safety culture and other processes of IMS will be instituted. Independent reviews in form of external audit for this purpose may also be considered.

Pertaining to Resource Management

- Ensures that AERB develops and promulgates its basic tools, the regulatory requirements and guidance through safety documents for nuclear and radiation facilities and activities.
- Continues to follow a systematic programme to periodically revise or develop new documents based on requirements identified during consenting and enforcement process, and to reflect regulatory and technological developments including international safety principles and good practices.
- Periodically reviews the feedback on the competences and human resources necessary to carry out the activities of AERB as per prevailing strategy and plan. Chairperson shall organise the availability of these resources and ensure that an appropriate strategy for manpower induction, competence development, knowledge management, and training of its Secretariat exists and is followed. Similarly, identification and availability of external additional expert resources from Technical Support Organisations (TSOs), consultants, advisors to achieve overall competence in meeting the goals, strategies, plans and objectives of AERB is reviewed by Chairperson.
- Assesses and finalises the annual budget as well as long term plan financial requirement based on inputs from various Directorates of Secretariat to carry out their functions and arrange to put it to the AEC with a view to include the same in Government's budget.

Administrative and Financial Authority

5.22 The Chairperson has full powers of the Head of a Department under the Delegation of Financial Power Rules, Supplementary Rules, General Financial Rules, General Provident Fund Rules, Contributory Provident Fund Rules, Treasury Rules and other relevant orders issued from time to time. For administrative convenience, the Chairperson of the Board, who has been vested with the executive functions of the Secretariat, further delegates some of the administrative and financial powers, as are re-delegatable, to other officers in the Secretariat with due regard to their levels of responsibilities*. However, powers for appropriation and re-appropriation of funds and powers to approve capital budget expenditure for new projects and revenue budget for fresh non-planned initiative is retained with Chairperson only.

5.23 The Chairperson of the Board, who is vested with the executive functions of the Secretariat, exercises the administrative and financial powers under Exercise of Financial Powers (DAE) Rules, 1978 as per Central Government Order No. 18/1(1)/97-ER/1165 dated June 6, 1997 and its subsequent amendments, and

- Establishes the organisational structure of the Secretariat with job responsibilities and may carry out any re-organisation or re-allocation of divisional responsibilities, within the approved organisational framework as deemed necessary, with intimation to the Board.
- Approves the allocation and distribution of manpower in the Secretariat including their inter-divisional transfers as well as transfers/deputations involving change in workplace location.
- Decides on international deputation of its staff.
- Constitutes all Regulatory and Management Committees /Advisory Panel/Specialist Groups/Expert Groups having external experts.
- Assigns decision making authority to different levels in the Secretariat with due regard to their levels of responsibilities (covered in the next chapter on 'Functioning and Decision Making').

5.24 Chairperson, AERB may permit any deviation from IMS in case of any exigencies or demanding situation. In case such deviation contradicts IMS document, it shall be informed to the Board.

* *Director/Head of the Division responsible for resource management at Headquarters and Heads of offices of AERB located outside headquarter region may be entrusted with additional administrative and financial authority to facilitate day to day functioning of the office.*

DIRECTORS AND EXECUTIVE DIRECTOR (Hierarchical Level-2)

5.25 The Directors of Directorates work under the supervision of Chairperson, AERB as per the organisational framework.

5.26 The main roles and responsibilities of Directors of various Directorates are:

- develop and implement plans for their areas of responsibility that are aligned with the broader vision, mission, values, policies, strategies and goals of AERB.
- communicate effectively with their staff to keep them informed about AERB's strategic plans and expectation from them for realisation of these plans.
- provide effective supervision and oversight as well as appropriate support for their staff.

5.27 The Chairperson, AERB designates Director of the Directorate which is responsible for overseeing the regulatory operations (licensing and regulatory oversight) as Executive Director.

HEADS OF DIVISIONS (Hierarchical Level-3)

5.28 Heads of Technical Divisions, Administration Division and Accounts Division work directly under supervision of respective Directors/Executive Director, as per the organisational structure.

5.29 The main roles and responsibilities of Heads of Divisions are:

- Formulation of plans and procedures in line with the functional responsibilities of the Divisions and execution of the approved procedures within the Division.
- Maintaining proper interface with other divisions as well as with the relevant stakeholders falling under the functional domain of the divisions, as applicable.
- Identify and develop regulatory approaches, strategies and plans for their respective divisions.
- Identify the necessary resources for their respective divisions;
- Allocate duties and responsibilities to staff in their respective divisions.
- Implement, manage, monitor and evaluate processes in accordance with the IMS.
- Develop a motivating work environment for staff by giving them responsibilities for challenging tasks and supporting and coaching them in case they need assistance.
- Coordinate all activities w.r.t. performance assessment within the Division and effect the implementation of management actions.
- Aid respective Director in formulation of Long Term plans related to manpower requirement, competency development and finance, Annual Budget and performance related Targets and reports.

5.30 Directorates, where there are no divisions, the responsibilities of Head of Division will be performed by the Director of the Directorate.

HEADS OF SECTIONS (Functional arrangement within Divisions)

5.31 The Divisions are sub-divided into various sections depending upon the specific functional & process requirement of the division, as necessary. Head of each such section will be designated as Section Head and is responsible to Head of the respective division.

5.32 The main roles and responsibilities of Head of Sections are:

- Responsible for execution of plan and procedures at section level and provide feedback on the same to respective Head of the Division.
- Execution of regulatory and management processes applicable for the section.
- Follow-up and supervision of the sectional work for efficiently and timely completion of the assignments.
- Developing a motivating work environment for their subordinates and provide guidance and mentoring support in continual basis.
- Act as role model concerning safety awareness by demonstrating a questioning attitude and good communication.

ADMINISTRATIVE HEAD (Hierarchical Level-3)

5.33 The Chief Administrative Officer (CAO) is responsible for overall coordination and execution of Administrative and Establishment matters in AERB, which includes activities like Recruitment, Promotion, Personnel, Welfare, Official Language Implementation, Communication, including telephones and fax, Security & Transport arrangements.

5.34 CAO acts as the staff Grievance Officer to deal with the grievances of officers and staff of AERB and Liaison Officer for SC/ST to deal with the grievances of employees belonging to SC/ST communities. CAO is designated as the Appointing/Disciplinary Authority for Group C posts in AERB, who is assisted by Administrative Officer (AO) -III, Assistant Personnel Officers (APOs) and Assistant Director Official Language (ADOL). CAO may further distribute the responsibilities to various officers within Administration Division for administrative convenience.

ACCOUNTS HEAD (Hierarchical Level-3)

5.35 Deputy Controller of Accounts (DCA) assists and advises Management of AERB in all financial matters and is responsible for overall supervision of payments and accounting functions of AERB. DCA ensures that all accounting allocations are appropriately made and documented and oversees accounts payable, accounts receivable, cash disbursements and pay roll functions. DCA assists in preparation of budget estimates and monitors expenditures with reference to budget estimates and reviews Audit Para. DCA is assisted by Pay and Accounts Officer. DCA may further distribute the responsibilities to various officers within Accounts Division for administrative convenience.

5.36 Authorities under Right To Information (RTI) Act, 2005

Central Public Information Officer (CPIO):

(i) to deal with requests from persons seeking information and render reasonable assistance to the persons seeking such information, taking the assistance of any other officer, if considered necessary by him or her for the proper discharge of duties [Section 5(3) & 5(4)];

(ii) to render 'all reasonable assistance', where request for information cannot be made in writing, to the person making the request orally to reduce the same into writing [Section 6(1)];

(iii) to dispose request for information under the Act, either providing the information requested on payment of prescribed fee or rejecting the request for reasons to be specified within the time period stipulated under the Act [Section 7(1)].

Central Assistant Public Information Officer (CAPIO): To receive applications for information or appeals under the Act for forwarding the same forthwith to the Central Public Information Officer or Appellate Officer or the Central Information Commission or the State Information Commission, as the case may be [Section 5 (2)].

Transparency Officer: It is an internal administrative arrangement within AERB for promotion of institutional transparency. Transparency officer is connected with promotion of institutional transparency commensurate with the letter and spirit of the RTI Act. He shall constantly remain in touch with the management about the strategy and the action to promote good management practices within the organisation centered on transparency. A CPIO will be free to seek guidance from the Transparency Officer about disclosure-norms – both in its general and specific aspects.

Appellate Authority: To decide on appeals preferred against the information provided by CPIO/CAPIO [Section 19].

5.37 Authorities for Public Grievance Redressal

***Grievance Officer*:** shall be actively involved in the process of dealing with grievances and shall be nodal point of contact to receive complaints/grievances from outside AERB. He will take decisions on grievances which are pending for more than three months. He will evolve procedures as part of integrated management system which are necessary for monitoring the public grievances and their redressal. On the basis of the data made available to him through the management system, the Grievance Officer will identify areas of recurring grievances, analyse underlying cases, suggest commissioning of appropriate studies, where necessary, for systemic/ procedural corrections, cause review of policies/procedures which are identified as sources of grievances. He will prepare an annual report which would inter-alia, highlight responsiveness and accountability achieved at all levels.

Appellate Authority: To decide on appeals against the grievance redressed by Grievance Officer.

5.38 Authorities for Prevention of Corruption

Vigilance Officer: Vigilance functions to be performed by the Vigilance Officer are of wide sweep and include collecting intelligence about the corrupt practices committed, or likely to be committed by the employees of his organisation; investigating or causing an investigation to be made into verifiable allegations reported to him; processing investigation reports for further consideration of the disciplinary authority concerned; referring the matters to the Commission for advice wherever necessary, taking steps to prevent commission of improper practices/misconducts, etc. Thus, the vigilance officer's functions can broadly be divided into three parts, viz. (i) Preventive vigilance; (ii) Punitive vigilance; and (iii) Surveillance and detection.

Chapter-6

Functioning and Decision Making

Based on its mandate, mission, vision and values, AERB formulated its "Organisational Policies" and "Organisational Strategies. To fulfil its mandate effectively, AERB identifies all the functions it needs to perform and also the processes (core and supporting) through which these functions are to be performed. For carrying out the identified functions, a hierarchical organisational framework is adopted with defined roles, responsibilities and authority at each level. The framework provides flexibility for establishing organisational structure based on the facilities and activities to be regulated and the identified functions and processes. After establishing the organisational structure, various hierarchical levels are empowered through appropriate assignment of authority according to the established decision making guidelines (regulatory as well as managerial), following graded approach.

Functioning of AERB

6.1 Core technical competency and experience are the basis of an effective regulatory body and are the significant attributes for its functional independence. AERB has devised its functioning with emphasis on in-house work utilizing competence and experience of the staff. The overall scheme of engagement and involvement of staff is depicted in figure-5:

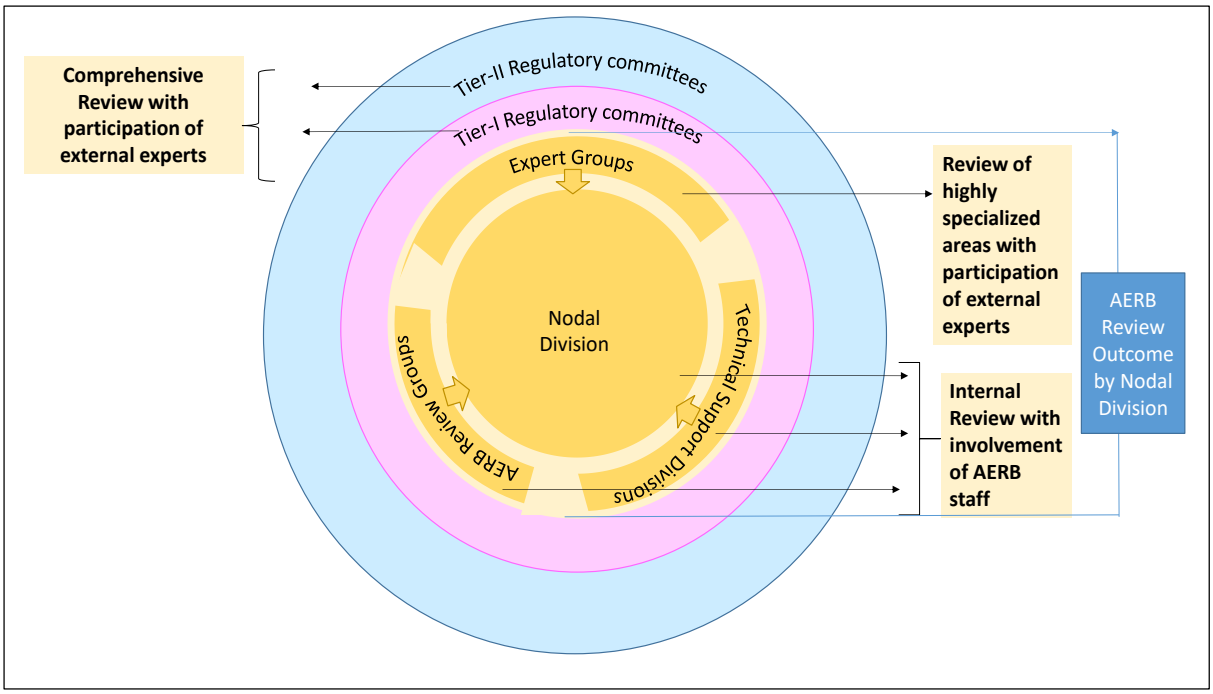


Figure-5: Overall scheme of Functioning of AERB

6.2 Nodal division formulates review plan indicating items/elements for review by AERB Review Groups (ARGs), technical support divisions, expert groups and

regulatory committees. The review plan is deliberated and accepted at Division level.

6.3 As it may not always be possible that expertise in niche/specialised areas is available in AERB, a few expert groups with outside experts are formed for these specialised areas to provide expert advice. Only the major Regulatory Hold Points (RHPs)/ consenting stages / generic safety issue or events / major modifications / generic licensing basis documents requiring holistic reviews by experts are subjected to multi-tier reviews by regulatory committees.

6.4 An integrated regulatory oversight is followed whereby safety review and assessment is adequately supplemented and complemented by regulatory inspection & resident site observer programme and vice versa. Wherever necessary, focused regulatory research is conducted either in-house or in participative / collaborative mode with premiere research institutes or sponsored in academic institutions.

6.5 Power to make decisions pertaining to regulatory processes is entrusted to the Board of AERB through S.O.4772 and to Chairperson, AERB by virtue of being the Competent Authority under various rules under the Atomic Energy Act, 1962.

Decision Making

6.6 The established channels for regulatory decision making is marked with process path (2) in figure-6.

6.7 For decisions on emerging regulatory or management issues, goal setting, setting regulatory and management policies, providing strategic directions or approach(es) to be adopted/ position to be taken on observed gaps, the matter is referred to “AERB Steering Committee (ASC)” (chaired by chairperson, AERB) for taking its views as part of interactive and participative process. Further, Chairperson, AERB may also seek views of Advisory Panel consisting of external members following a consultative process, as needed. Chairperson, AERB takes the final decision or puts the matter to the Board as per assigned decision making authority. The decision marked with process path (4) in figure -6 may provide for selecting one of the process path i.e. (1), (2) or ACNRS/AC-SR process path as provided in Level-1(A) document or combination of these or may provide for altogether a new path.

6.8 An Executive Committee (EC) (chaired by hierarchical Level-2 officer) is constituted for execution, coordination, monitoring of work related to regular functioning of AERB concerning organisational matters connected with management and support functions as per IMS following interactive and participative process. Recommendations of EC are to be implemented/processed further by agencies identified in the record of discussions of EC.

Matters pertaining to Directorates including progress review, coordination, monitoring, emergent issues and aspects related to organisational excellence to be reviewed by respective Directorate level Progress Review & Coordination Committee (PRCC-Directorate).

6.9 The overall decision making arrangement adopted in AERB is depicted in Figure-6.

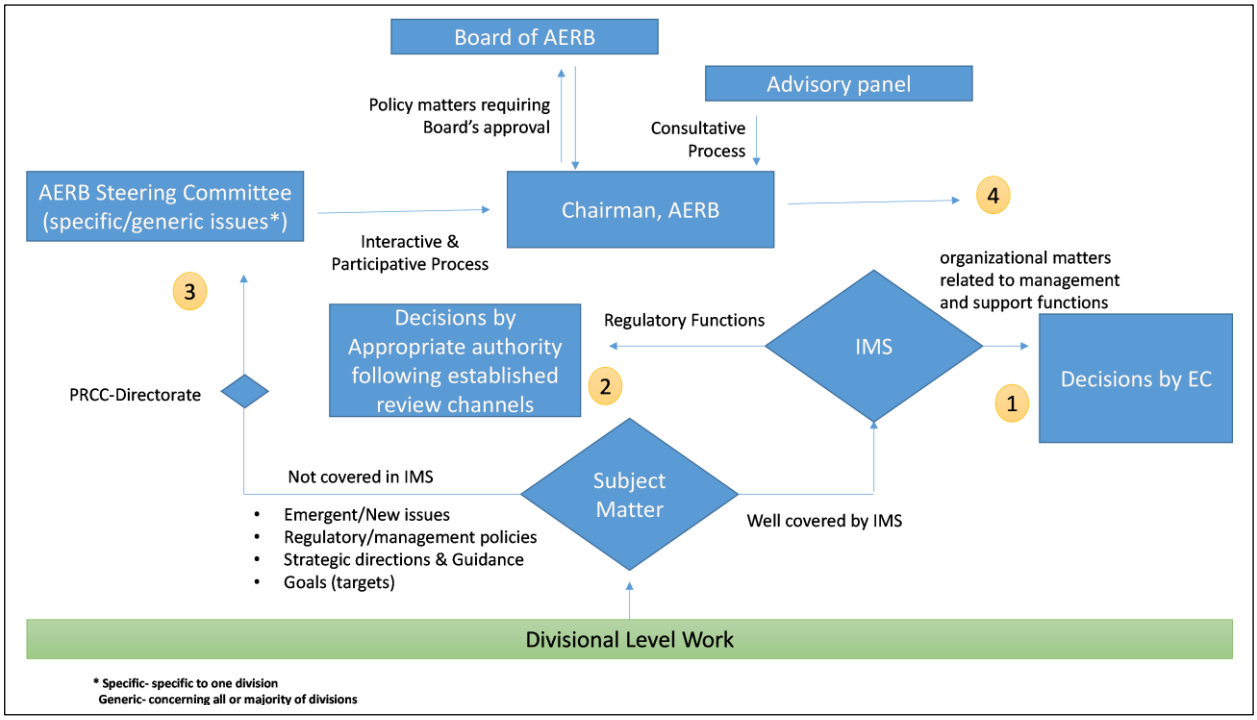


Figure-6: Overall Decision Making arrangement in AERB

6.10 For administrative and management decision making, the authority and powers, as are re-delegatable, are further delegated by Chairperson, AERB to various hierarchical levels in the Secretariat.

6.11 With regard to regulatory decision making (i.e. within the established core regulatory processes), the authority rests with the Board (as assigned through S.O.4772) or Chairperson, AERB (by virtue of competent authority under various rules). However, in order to aid the Board and Chairperson, AERB in the decision making process, a structured framework has been evolved as part of IMS which provides for allocation of responsibilities at various levels in the Secretariat in line with objectives, policies and strategies outlined in this document.

6.12 The mission, organisational policies and strategies govern the regulatory approach adopted by the AERB. At the core of the approach is the licensee/consentee who has the prime responsibility for safety and no regulatory action should diminish this. AERB is responsible to observe the level of safety achieved by licensee/consentee, makes a judgment about its adequacy and then take appropriate regulatory action.

6.13 Decision making is an integral part of all core regulatory processes of AERB. The decisions are being taken by the secretariat of AERB, either individually or collectively, and the accountability for the decision is vested to the identified decision maker, in accordance with the allocated responsibility. The decision making by Board and Secretariat is elaborated in Appendix of this document. The philosophy behind assignment of regulatory decision making authority is

depicted in figure-7. The figure-7 is only a pictorial depiction which depends on gradation in safety significance (by colour coding) and number of applications processed (by texture coding). The priority to safety, safety significance is given emphasis over quantum of the task.

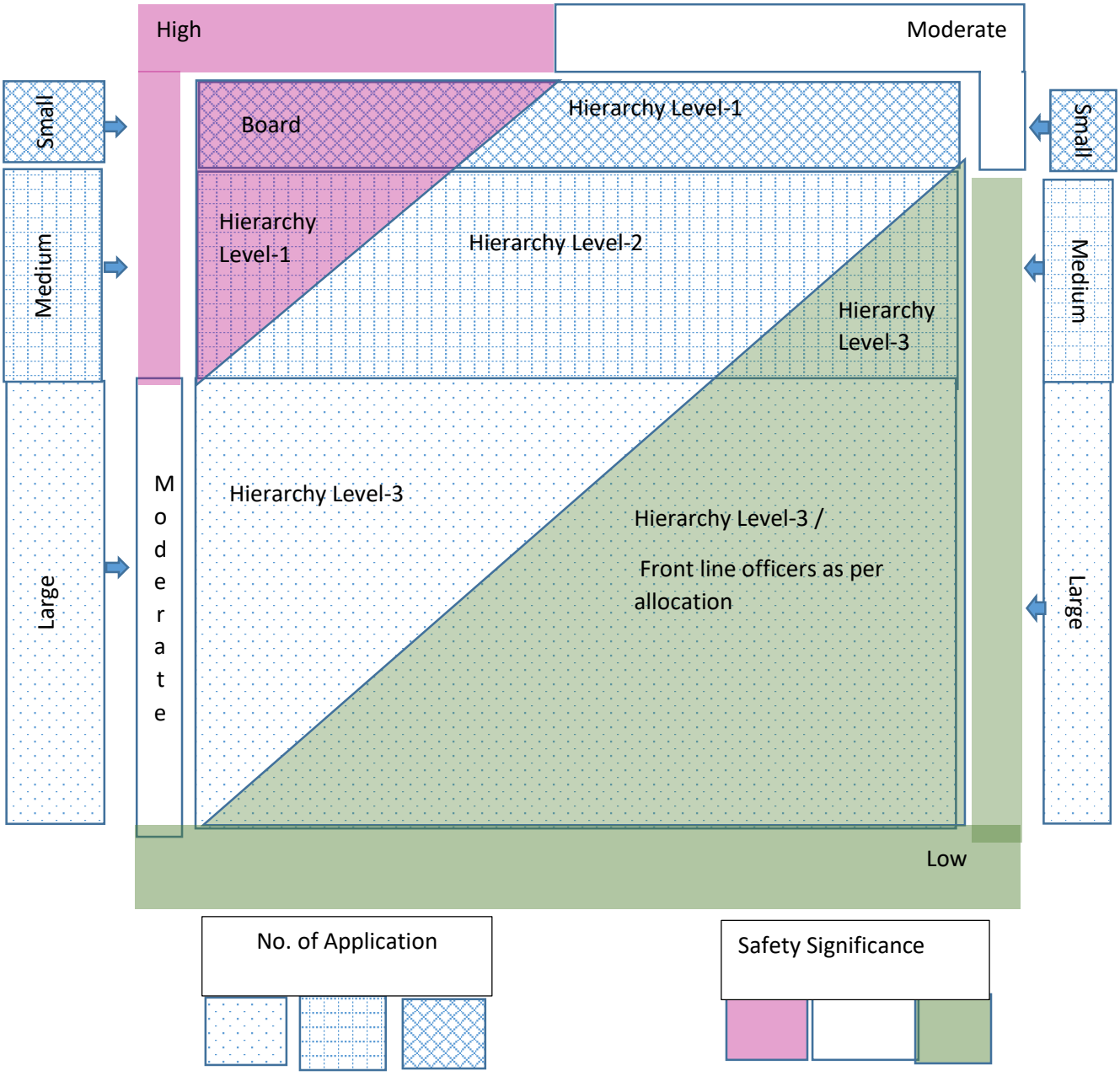


Figure-7: Philosophy behind assignment of decision making authority

6.14 The multi-tier regulatory review structure typically consists of technology/ plant / facility specific committees at Tier-I level for focussed review of the safety cases/issues. Tier-II Committee consists of multi-disciplinary experts in the area of nuclear, radiation and industrial safety for a wider and broad based review. The final review and decision making is carried out by the Board of AERB where members are from various reputed academic, professional or government organisations at national level. Figure-8 provides the multi-tier review structure and their interaction with various levels of AERB management for aiding the decision making process.

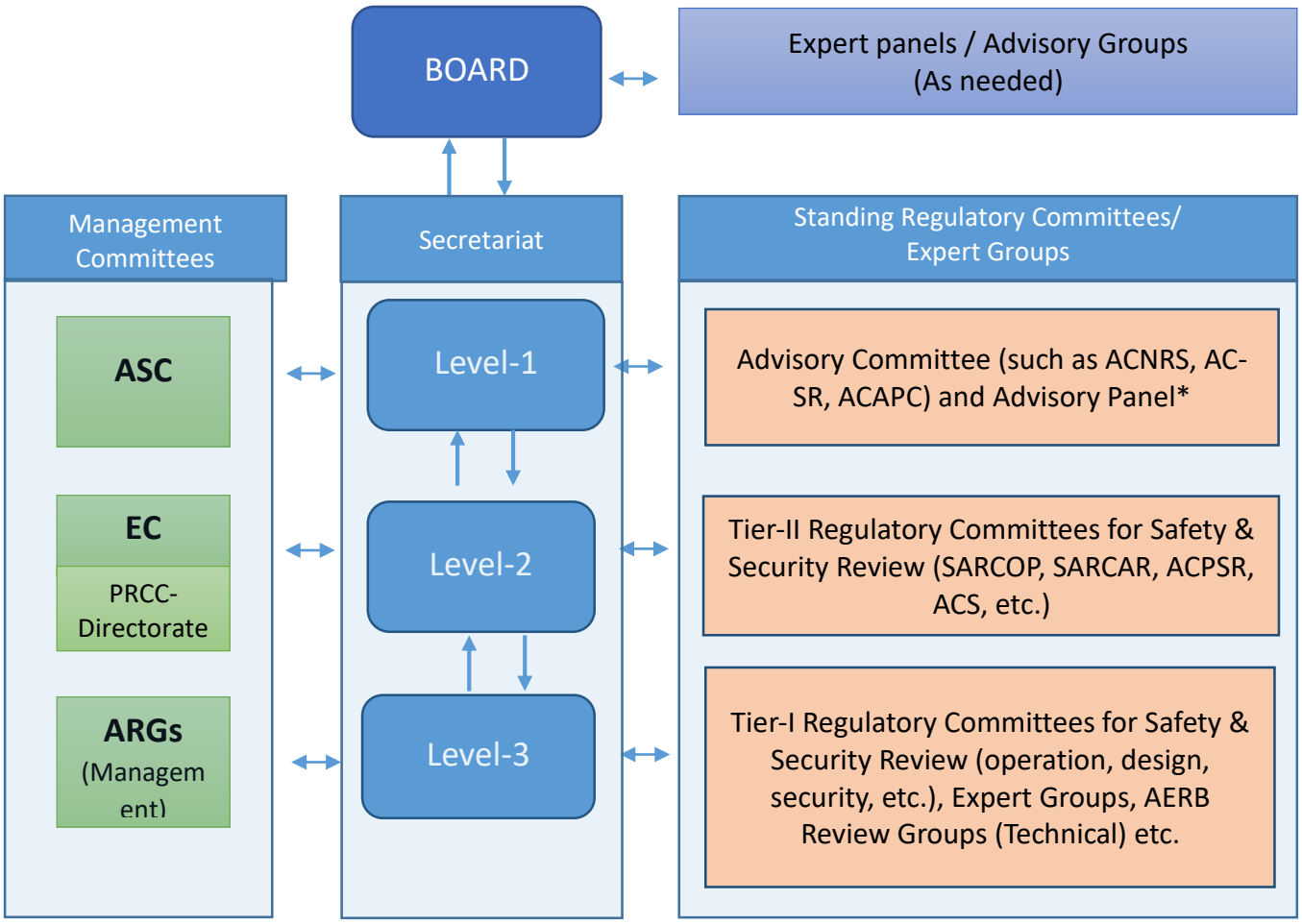


Figure-8: Interactions between AERB and its Committees for Regulatory and Management Processes

Note:

(1) All Committees/Panels, Expert group with external members are constituted by Chairperson, AERB and are treated at par for honorarium purpose.

(2) Internal Groups (with officers from AERB) are formed by Executive Director/Director AERB for subject matters under them.

**Advisory Panel is common to regulatory and management related matters.*

Abbreviation:

ACNRS- Advisory Committee on Nuclear and Radiation Safety
AC-SR- Advisory Committee for Safety Research
ACAPC- Advisory Committee on Awareness and Public Communication
SARCOP- Safety Review Committee for Operating Plants
SARCAR- Safety Review Committee for Applications of Radiation
ACPSR- Apex Committee for Project Safety Review
ACS- Apex Committee for Security

6.15 The multi-tiered system of review follows the principle of "management by exception", based on requirements and criteria specified by AERB, following graded approach. In this approach, the issues of greater significance are given consideration at higher level committees for their satisfactory resolution. Recommendations of these committees concerning the various proposals/regulatory submissions are further considered by AERB for arriving at regulatory decisions. This arrangement ensures comprehensiveness of the reviews and compliance with the specified requirements.

6.16 The multi-tier review system provides for wider representation of various interested parties. The criteria for formation of multi-tier regulatory committees is such that the decision making is inclusive, participative yet independent taking into account conflict of interest. This multi-tier review ensures independence and graded approach in decision making. It provides checks and balances to minimise subjectivity in regulatory decisions and provides for taking into account the collective wisdom of the members for impartial, unbiased, consistent, transparent, fair, just and reasonable decisions taking all aspects in consideration. The decision making process follows the applicable structured framework and principles which includes providing opportunity to be heard before decision is taken.

6.17 This system provides for taking a decision on the basis of the recommendations which have emerged out of culmination of multi-tier review process. In all cases of decision making, the ultimate responsibility and accountability of taking the decision rests with the identified decision maker to whom such authority has been assigned. In most cases, the decisions are based on such recommendations by honouring the collective wisdom of experts. If, an alternate decision is taken by the decision maker, then the reasons and justification for taking such alternate views must be recorded and will be open for scrutiny at appropriate level / during IMS audit process.

6.18 This system also provides for dealing with differing opinion and the final decision making by the decision maker.

6.19 The quality of decisions depends on the way these decisions are made. The approach adopted for decision making is of “inquiry”. Inquiry is an open, collaborative process designed to consider multiple alternatives, fostering the exchange of diverse viewpoints, competing ideas and constructive conflicts to produce well considered and balanced recommendations. The adopted multi-tier review process based on this approach ensures systematic collection and integrated review of relevant safety information (quantitative as well as qualitative), safety alternatives, and proper application of graded approach besides reasonably neutralizing various biases and interest of conflicts. Built-in checks and balances in the decision making process has potential to uncover errors in thinking before they become errors in judgement. Strategy of decision making by an identified individual based on recommendations of multi-tier review helps in safeguarding against potential group bias and common decision-making traps (anchoring trap, framing trap, status-quo trap, sunk-cost trap, confirming evidence trap, uncertainty traps (overconfidence trap, prudence trap, recallability trap)).

6.20 This decision making arrangement also helps in establishing leadership for safety at all levels. Such arrangement ensures that all staff of AERB take personal responsibility for safety, hold themselves accountable and demonstrate values and ethics which is facilitated through questioning attitude and open communication. They feel free to raise safety concerns without fear of retaliation, intimidation, harassment, or discrimination and uphold the stated principles of ethics of AERB and ensure that safety culture gets embedded into all of regulatory processes.

6.21 All decisions, along with their bases, are formally recorded and appropriately communicated to interested parties. Strategic directions and Guidance

contained in Level-1(A) on 'Management functions and allocation of responsibility' shall provide for decision making authority at different levels within the secretariat, and arrangements/steps involved in functioning and decision making including adequate recording of decisions and communications of the decisions to various interested parties.

Chapter-7 Evaluation of IMS

7.1 Management system provides for maintaining and improving its management system by establishing appropriate management controls, feedback loops, and inculcating well-established values. Management at all levels is expected to demonstrate a commitment to the establishment, implementation, assessment and continual improvement of the management system through the processes described in IMS and its supporting documents.

7.2 The activities related to performance management and continual improvement is a key activity of the IMS. Management at all hierarchical levels shall regularly monitor and measure progress in the delivery of plans (in line with strategies) and budgets.

7.3 For any process, the expected phases of process execution are 1) Planning, 2) Implementation, 3) Self-assessment and 4) Review and Corrective Action for Improvement. Input from top management and executive committee for improvement in various regulatory and management processes shall be incorporated during appropriate phases of process execution on continual basis by the process owner.

7.4 Among the phases of process execution, self-assessment is of prime importance in IMS. Hence, all processes should undergo self-assessment by the process executors. The findings of the self-assessment are then reviewed for implementation of corrective action. Self –assessment, review and corrective action together constitutes process monitoring.

1. Self-Assessment

With continuous improvement in mind, process executors perform a formal assessment of their process. Process owners shall ensure that within each block of three years, self-assessment with respect to all the processes of Directorate/Division is completed by the respective process executors. Self-assessment procedure for each regulatory process shall be developed by respective process owner in accordance with IMS Level -2 (MP) document on performance management.

2. Review and Corrective Action

"Review & Corrective Action" is carried out for improvement of IMS on the basis of the outcomes of the self-assessment. The various steps involved are as follows:

a) Review and Corrective Action by Process Owner

Based on self-assessment of a particular process the process owner or the responsible division head (Level-3 of the organisational hierarchy) takes corrective measures when concerned solely to the implementation of the process. Such actions or any other corrective/preventive/ improvement action plans are informed to respective Directors of Directorates (Level-2 of the organisational hierarchy) as applicable.

b) Review and Corrective Action by Progress Review & Coordination Committee of Directorate

The Progress Review & Coordination Committee of Directorate reviews the self-assessment along with the report of the process owner for any corrective action in the planning of the process. Such corrective actions do not impact any other interfacing processes and that is within directorate resources. In cases where the improvement/corrective measures are linked to other directorate activities they are discussed in the Executive Committee for further actions.

c) Review by Executive Committee

The Executive Committee (EC) of AERB takes stock of information and reports of management actions taken or need to be taken by various Directorates/Divisions periodically. Based of review and recommendations of EC, improvement/corrective measures are implemented as identified by EC.

d) Review and Corrective Action by Chairperson

Consolidated reports of management activities and improvement measures initiated within AERB are reported to Chairperson, AERB by the Executive Committee. Chairperson, AERB may hold meeting of the AERB Steering Committee to review the implementation of the corrective actions towards assessing the effectiveness of IMS, its activities, processes and interfaces. Outcome of such review will be implemented through Executive Committee.

7.5 Handling of exceptions (non-conformities)

Under exceptional circumstances, deviation from established strategies, processes and procedures can be authorised by the Chairperson, AERB, Directors of Directorates and Heads of Divisions as applicable, on justified and documented grounds, as per IMS Level-1 (A) document on "Strategic Direction and Guidance on Management functions and allocation of responsibility'.

7.6 Apart from the self assessment, the supervision of IMS will be carried out periodically independently through Internal Audit and External Audit. The objective of supervision is to ensure that Integrated Management System is being implemented effectively in the organisation. The external audit will ensure independent oversight of AERB and its key decisions. The process will be able to identify any deficiency in IMS, deviations or inconsistency between IMS documents and office orders issued by the Management. This process shall not only ensure the implementation of regulatory processes, but also the implementation of management processes as per the laid out strategies and strategic directions and matters related to office administration across the organisation. Outcome and identified corrective actions of internal audit are reviewed and implemented following graded approach as per figure-9. Chairperson, AERB is responsible for inviting external audits. These processes will be coordinated by the nodal Directorate responsible for supervision of IMS. The outcome of this process may be utilized by the Top Management as one of the inputs for monitoring the functioning of the organisation. Changes or modifications in the organisations, as necessary, may be suggested to improve the effectiveness of IMS.

7.7 The schematic of the workflow process for evaluation of IMS is given in Figure-9.

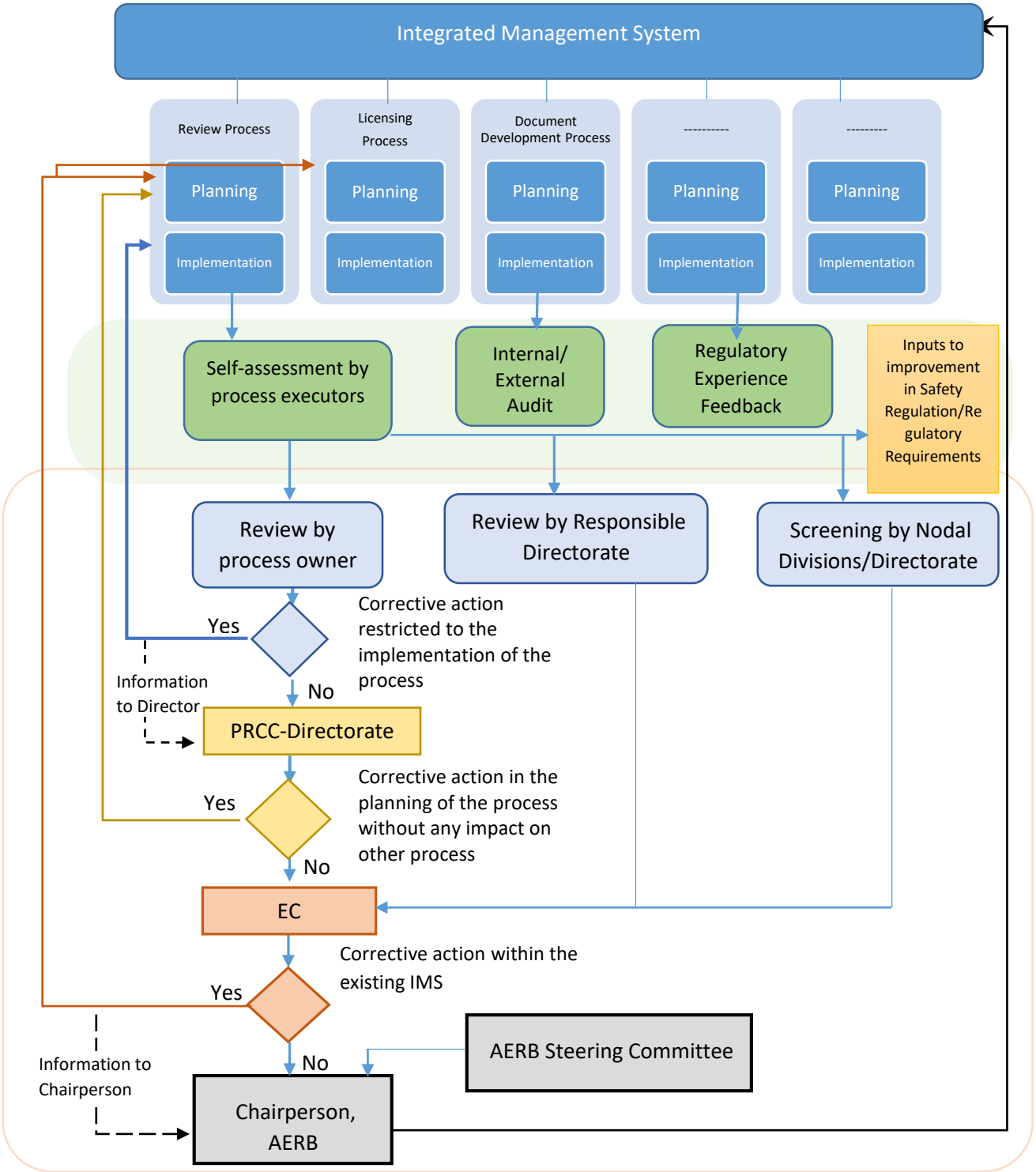


Figure-9: Schematic for Evaluation of IMS for continual improvement

Decision Making by the Board and the Secretariat along with Review Levels

The typical list of decision making levels for grant of approvals by the Board and the Secretariat of AERB under various regulatory functions are depicted in the following table along with respective levels of review.

1. Chairperson, AERB authorizes officers in different hierarchical levels within the Secretariat to issue various forms of approvals. The details will be covered in IMS Level-1(A) document on 'Strategic Direction and Guidance on Management functions and allocation of responsibility'.
2. The nomenclature used for various terms associated with licensing will be governed by respective statutory provisions, Safety Codes and Safety Guides. Terms, as used here, are only indicative and used for deciding level of review and approval.
3. In case of any conflict between the application of graded approach and respective statutory provisions, the later will prevail for arriving at review and approval levels.

1.0 Development & Revision of Regulations and Guidance

Board	Secretariat
- Safety Codes and Standards - Addendum/amendments to Safety Codes/ Safety Standards - Delegated legislation (Notification, orders/ safety directives)	- Regulatory Documents (REGDOCs) Development / Revision Proposal - REGDOCs other than Safety Codes and Standards (e.g. Safety Guides, Safety Manuals) - Addendum and amendment to Safety Guides and Safety Manuals
Two levels review and Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

2.0 Development & Revision of IMS documents

Board	Secretariat
IMS of AERB	Level-1(A): Generic Strategic Directions and Guidance Level-1(B): Process specific strategies and strategic directions Level-2 (RP): Regulatory Processes Level-2 (MP): Management Processes Level-3: Procedures and Instructions
Two levels review and Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

3.0 Licensing and Safety Review & Assessment

The categories of facilities and activities listed are organized applying the Graded Approach.

- Grade I Facilities with potential for significant off-site radiological consequences or have high hazard potential from industrial safety consideration
- Grade II Facilities: Facilities with potential for significant on-site radiological consequences or have medium hazard potential from industrial safety consideration
- Grade III Facilities: Facilities with potential for no significant on-site radiological consequences or have low hazard potential from industrial safety consideration

3.1 Nuclear Power Projects & Plants

Board	Secretariat
• Consent for: - siting, - design/ construction (combined/separate) - Commissioning* with fuel - decommissioning - validity of extension of consents approved by the Board • Licence for: - initial operation# / regular operation, as applicable - Extension of operation beyond the period of 'license for regular operation'# • Release from regulatory control • Modification of license with changes exceeding the licensing basis safety analyses	- Consenting sub-stages/ Regulatory Hold Points - Modifications of safety significance within the licensing basis safety analyses - Renewal of license/operation permit within design life/validity of regular license for operation. - Combining of stages/sub-stages - Approval of Licensing basis documents (e.g. Final Safety Analysis Report (FSAR), Technical Specifications, Emergency Planning & Response (EPR) plans) - Waste authorisation - Senior management certification, licensing of operating personnel, - Approval of Radiological Safety Officer (RSO) and Competent Person - Major stages of refurbishment activities - Modifications of license with changes within the licensing basis safety analyses
Tier-I, Tier-II and Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

* a) for designs earlier reviewed combined license of commissioning with nuclear fuel and initial license of operation (5 years)

b) for designs reviewed for the first time

- Consents for commissioning with fuel up to LPPEs
- Initial license for operation (for 5 years) after 100 days of stable operation at rated/ full power

as defined in SG/G-1

3.2 Industrial Facilities

Board	Secretariat
Grade I facilities (e.g: H_2S based Heavy Water Plants (HWPs)) - Approval of plans - Start of manufacturing process	**Grade- II & III Facilities** (e.g: Ammonia based HWPs, Electronic Corporation of India Ltd. (ECIL), etc.) - Approval of plans - Start of manufacturing process **Grade-I, II & III facilities** - Regulatory hold points - Design modifications (including capacity enhancement, change in product mix, etc.) of safety significance - Approval /Acceptance/ revision of licensing basis documents - Deviations from licensing basis documents - Licensing of operating personnel ad designation of competent persons - Closure of factory as per Atomic Energy (Factories) Rules
Tier-I, Tier-II and Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

3.3 Other Nuclear Facilities

Board	Secretariat
Grade-II Facilities (e.g. Research reactors, backend FCFs) - siting - operation - operation beyond the validity of 'license for regular operation' - Decommissioning **Grade-III facilities** (U ore processing and Tailings Ponds, etc) - Siting - Decommissioning	**Grade-II & III Facilities** - Design/Construction, Commissioning including all major sub-stages - Siting, mine development, decommisioing, mine closure of Grade III facilities - waste authorisation - Modifications of safety significance (including capacity enhancements, change in product mix, etc.) - Renewal of license/operation permit within design life - Start-up after major refurbishment activities - Approval of Licensing basis documents (e.g. Technical Specifications, EPR manual) - licensing of operating personnel, - Approval of RSO and Competent Person
Tier-1, Tier-II and Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

3.4 Radiation Facilities

Board	Secretariat
License for operation of facility/equipment employing first of a kind technology of radiation facilities falling under license category under Atomic Energy (Radiation Protection) Rules, 2004 [RPR, 2004](ex- accelerator, irradiators, etc.)	- License, authorisation, registration for operation radiation facilities and consent for approval for stages (design, construction, commissioning, decommissioning) under RPR, 2004 - Approval of Licensing basis documents - Design approval (including siting) - Major design modifications of safety significance - Waste authorisation - Approval of RSO - Approval of radiation safety training syllabus for radiation professionals
Tier-II & Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

3.5 Activities associated with radioactive material (transport & trade)

Board	Secretariat
Specific matter referred to the Board by the Secretariat	- Type approval of equipment and sources under RPR, 2004 - Approval for package design for transport of radioactive material - Approval for 'shipment approval' for radioactive consignment - NOC for Import & Export of Radioactive material
Tier II and Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

4.0 Enforcement

Board	Secretariat
- Withdrawal of license for Grade-I facility - Initiation of penal action - Appeal against enforcement actions taken by Secretariat	- Withdrawal of consents/licenses for Grade II & III facilities - Suspension of operation and/or curtailment of activities - Sealing of installations/equipment - Warning Letters & Directives - De-certification/delicensing of licensed/personnel (including competent persons, RSOs, etc)
Two levels review and Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

5.0 Public Information

Board	Secretariat
- Notification of Extraordinary nuclear events under the Civil Liability for Nuclear Damage Act, 2010 - Annual Report	- Press release, website updates, newsletters, bulletins, etc.
Two levels review and Board	Review Levels as mentioned in IMS document Level-1(A) on Strategic Directions and Guidance on Management Functions and Allocation of Responsibility'

Annexure-I

Legal Mandate

Statutory Mandate

AERB derives its Regulatory Authority from the following Acts and Rules.

Atomic Energy Act and Rules

The Presidential order (S.O.4772) constituting AERB delegated various safety and regulatory functions under Section 16, 17 and 23 of Atomic Energy Act to AERB. AERB has been entrusted with the responsibility to enforce rules framed under the Atomic Energy Act for radiation safety in the country and industrial safety under the Factories Act, 1948 in units of DAE (except BARC facilities as per DAE notification dated June 20, 2000 and in mines as per CAC's decision in 2006. The Rules under the Atomic Energy Act for which Chairperson, AERB has been designated as the Competent Authority are

i) Atomic Energy (Radiation Protection) Rules, 2004
ii) Atomic Energy (Safe Disposal of Radioactive Wastes) Rules, 1987
iii) Atomic Energy (Working of Mines, Minerals and Handling of Prescribed Substance) Rules, 1984
iv) Atomic Energy (Factories) Rules, 1996

Atomic Energy Commission had also expanded the scope of functions of AERB by asking AERB to regulate nuclear security aspects which are relevant to safety.

Civil Liability for Nuclear Damage Act, 2010

Section 3 of the Act mandates AERB to notify nuclear incidents after assessing the gravity of threat and risk involved, and to cause wide publicity of the notification.

Environment Protection Act, 1986 and Rules

Section 10 and Section11 of the EPA, 1986 empowers AERB for entry and inspection and to collect samples.

Schedule 5 of Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 (amended in 2000) recognises AERB as the concerned authority for enforcement of directions and procedures as per the provisions of the Atomic Energy Act, 1962, particularly w.r.t notification of major accidents, approval and notification of sites, Safety report and safety audit reports, acceptance of On-Site Emergency plans and assisting the District Collector in the preparation of Off-Site emergency plans.

The Hazardous Wastes Management and Handing Rules, 1989 exempts radioactive wastes from its scope as it would be covered under Atomic Energy Act (for which AERB has the necessary mandate to regulate)

Air (Prevention & Control of Pollution) Act, 1981

Air Act exempts radioactive air pollution from its scope as it would be covered under Atomic Energy Act (for which AERB has the necessary mandate to regulate).

Atomic Minerals Concession Rules, 2016

The First Schedule of Mines and Minerals (Development & Regulation) Act lists the atomic minerals and AERB has been mandated to regulate the mining of atomic minerals w.r.t. radiological safety under the Atomic Energy Mineral Concession Rules, 2016.

National Disaster Management Plan

National Disaster Management Plan (2019) of India framed under the Disaster Management Act, 2005 mandates AERB to provide support in the preparation of national plan for nuclear and radiological emergencies.

National Policies

The requirements specified by AERB would be in accordance with the national policy (on nuclear and radiation safety and radioactive waste management). AERB's requirements are also in consonance with the following related national policies:

- National Environmental Policy framed by MoEF
- National Policy on Safety, Health and Environment at Workplace framed by Ministry of Labour & Employment
- National Mineral Policy framed by Ministry of Mines
- BSM Policy 1998 framed by DAE
- National Policy on Disaster Management, 2009, Ministry of Home Affairs
- National Foreign Trade Policy (Exim Policy) framed by Directorate general of Foreign Trade (DGFT), Ministry of Commerce and Industry
- Integrated Energy Policy, 2006 framed by Planning Commission of India

International Obligations

AERB is duty bound to discharge its mandated responsibilities in fulfillment of the following international obligations dealing with nuclear & radiation safety and security aspects:

- Convention on Nuclear Safety (INFCIRC/449) and Vienna Declaration on Nuclear Safety (INFCIRC/872)
- Convention on Early Notification of a Nuclear Accident (INFCIRC/335)
- Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency (INFCIRC/336)
- Convention on the Physical Protection of Nuclear Material (INFCIRC/274)- and its 2005 amendment
- IAEA Code of Conduct on the Safety and Security of Radioactive Sources and Illicit Trafficking Data Base (ITDB)
- IAEA Code of Conduct on the Safety of Research Reactors
- IAEA Guidance on the Import and Export of Radioactive Sources
- ILO Radiation Protection Convention (C-115)

Other Obligations

The management of AERB is committed to performance of the various obligations it has entered into, with national as well as international agencies, namely

- Bilateral Arrangements with International regulatory bodies and their TSOs
- Multilateral agreements
- MoUs with TSOs, Academic Institutes, Universities, Professional Bodies/agencies, State Governments for setting up of Directorate of Radiation Safety (DRS), etc.
- Reporting of events in International Nuclear and Radiological Event Scale (INES), Incident Reporting System (IRS) and Fuel Incident Notification and Analysis System (FINAS) etc.

Citizen Centric Administration Mandate

AERB is obliged to maintain high level of transparency and accountability in functioning through various citizen centric administration mandate assigned to it:

Right to Information Act, 2005

Under this Act, access to information from a public agency has become a statutory right of every citizen. The management of AERB is committed to disclosure of all relevant information in public domain as is permissible under the Act.

Citizen Charter for Public Grievance Redressal

Department of Administrative Reforms and Public Grievances has issued policy guidelines for all Government departments to institute mechanism for redressal of public grievances. In this regard the management of AERB is bound by its citizen charter which represents the commitment of the management of AERB towards standard, quality and time frame of service delivery, grievance redress mechanism, transparency and accountability.

National Litigation Policy

Government of India has framed a National Litigation Policy with a view to ensure conduct of responsible litigation by all Central Government organisations. The Management of AERB is committed to the guidelines laid down in this policy w.r.t pleadings/counters, adjournments, representation, appeals, review etc.

Office Management Mandate

Establishment related matters

It is obligatory on the part of the management of AERB to comply with the establishment related requirements as outlined in various statutes, Central Civil Services Rules, and Departmental Orders such as those related to

- Security arrangements including information security under Information Technology Act, 2000 and security of official information & documents
- Purchase & Procurement
- DAK /File / Records Management
- Departmental Communication

Employee related matters

The management of AERB ensures that all its employees and staff respect and adhere to the Code of Ethics while carrying out day to day activities in the organisation. The management of AERB is committed to ensure adherence of the provisions of following statutes which deal with honesty, integrity ethics, and conduct of its employees

- The Central Vigilance Commission Act, 2003
- The Prevention of Corruption Act, 1988
- The Whistle Blowers Protection Act, 2011
- The Lokpal and Lokayuktas Act, 2013
- Income Tax Act, 1995
- The Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013
- Central Civil Services (Conduct) Rules, 1964
- Central Civil Services (Classification, Control and Appeal) Rules, 1965
- Bharatiya Nyaya Sanhita(BNS), Bharatiya Nagarik Suraksha Sanhita (BNSS) , etc.

The Management of AERB is committed to ensure that its staff abide by their service conditions and enjoy the allowances, privileges, perks, incentives and other welfare and recreation amenities as admissible by Government Rules [Central Civil Services (CCS), General Finance Rules (GFR) etc.], instructions and Departmental Schemes.

Annexure-II

Typical List of IMS implementation supporting documents

Governing Document	Integrated management System of AERB
	Generic Strategies, Strategic Directions and Guidance
L-1(A)	Management Functions and Allocation of Responsibility Application of Graded Approach in Safety Regulation Systemic Approach for Considering Human, Organisational and Technical (HOT) Factors Capturing and Utilizing Regulatory Experience Feedback Enhancing Transparency & Accountability in Functioning of AERB Protocol for Internal Communication within AERB Protocol for Communication with External Agencies
	Process Specific Strategies, Strategic Directions and Guidance
L-1(B)	Development & Revision of Regulations & Guidance documents Licensing Safety Review & Assessment Enforcement Conduct of Safety Research Engagement with Interested Parties (Communication & consultation) Human Resource Management
	Management Process
L-2(MP)	Policy Making Process Management Performance Management Governance Planning Management of Change
	Regulatory Process
L-2 (RP)	Development & Revision of Regulations & Guidance Documents Licensing Safety Review & Assessment Inspection

	Enforcement Arrangements and Monitoring of Emergency Management Conduct of Safety Research Legal Support Engagement with Interested Parties Liaison with Government Ministries/Department (DAE and other Ministries/Departments) International Cooperation Human Resource Management Infrastructure Management Financial Management Control of IMS Documentation Control of Documents, Records & Information
	Procedures and Instructions
L-3 (Common to Technical Divisions)	Organisational Structure of the Division/Directorate (with roles and responsibilities) Procedures, work-plans, checklists for execution of various elements of processes Monitoring and tracking of work progress within division/directorate Divisional level Records & Information Management Procedures (maintaining filing system & file register, maintaining process records and information) Self-Assessment of Regulatory & Management Processes Capturing and Management of Regulatory Experience Feedback within Division Internal and External Communication Practices of Division/Directorate
L-3 (Procedures for administrative support)	Office Management Establishment Matters Personnel Matters General Administration Matters Finance and Accounts Matters

Note: *Apart from above, individual Division/Directorate may develop additional Level-3 documents, as deemed necessary for regulatory and management processes, towards discharge of their assigned mandate.*

Annexure-III

Historical Account of Implementation of IMS in AERB

AERB's organisational structure was gradually evolved and strengthened over the years to discharge the functional responsibilities in a responsible manner. AERB had progressively established its regulatory processes commensurate with the given mandate. Although, the Management System of AERB was not specifically designed to meet any national or international quality management standards, the elements of IAEA GS-R-3 were already embedded in the Management System of AERB.

In the year 2006, for the purpose of conducting external scrutiny and certification, AERB chose to adopt Quality Standard of ISO:9000. As part of compliance to ISO:9000, the AERB's Quality Management System (QMS) focussed on integrating three main processes namely (1) Document Development, (2) Consenting and (3) Regulatory Inspection process. Other regulatory processes (like Safety review, Safety Research, Emergency Monitoring, etc.) and management processes remained out of AERB's QMS.

In the year 2013, as part of India's preparation for IAEA's Integrated regulatory Review Service (IRRS) mission, AERB started to conduct its self-assessment in line with the IAEA's guidance on Self-Assessment of Regulatory Infrastructure for Safety (SARIS). It was observed that to fulfil certain requirements under GSR part-1 and GS-R-3, integration of various regulatory and management processes of AERB was essential. AERB initially contemplated developing interfaces between various processes to integrate them under Integrated Management System (IMS) following GS-R-3 approach. However, as QMS and certification under ISO 9000 through internal audit and external scrutiny was well established in AERB, it continued to remain in vogue with preliminary efforts initiated towards development of IMS.

In year 2015, during peer review mission, the IRRS team observed the above status and recommended that "The AERB should finalize and fully implement its integrated management system (IMS), based on GS-R-3. In year 2016, IAEA published the GSR Part 2 on "Leadership and Management for Safety" which superseded the GS-R-3. As IAEA Standards are the reference document for IRRS peer Review Mission, action was initiated to further increase QMS scope and structure it in line with IAEA's GSR Part 2 document. The IAEA GSR Part-2, though includes regulatory bodies in its scope, the content of the document refers mostly to the functions and processes of licensee organisation. Further, for implementing requirements of IAEA GSR Part-2, the guide available was IAEA GSG 3.1 which also is applicable for Nuclear facilities and their activities, rather than on regulations.

Taking into account of the above developments, in June 2016, Shri D.K. Shukla, then Executive Director, AERB constituted a Working Group for formulation of internal procedures of AERB. The intent of formulating 'internal procedures' was to have at one place the complete sets of procedures required for smooth and efficient functioning of AERB in a seamless manner. In view of IRRS mission recommendation, in January 2017, a Task Force for development and implementation of Integrated Management System was constituted by Shri S. A. Bhardwaj, Chairperson, AERB. The Task Force identified the gaps in existing

management systems against GSR Part-2. Subsequently, in July 2017, Chairperson, AERB constituted a Committee for preparing Integrated Management System for the activities of AERB. The Committee considered the outcome of the work done by the previous Working Group and Task Force. The members of the Committee, especially Shri J.Koley, Shri Soumen Sinha, Shri Susheel Kumar and Shri Gopal Jee actively contributed in development of the IMS. The Committee functioned under the day to day guidance of Shri D.K.Shukla with active support from Shri Bhardwaj.

In parallel, AERB initiated a programme to strengthen its processes and concurrently develop and integrate all the internal procedures for its coherent functioning. Necessary changes in organisational structure were also made to meet this objective. Some of the key improvements effected in view of this exercise were as follows, which were briefed to the Board periodically:

(i) strengthening the internal review process and making staff of AERB responsible for the regulatory decisions and Safety Committees were made recommendatory including SARCOP;
(ii) criteria for formation of multi-tier safety review committees was evolved such that the decision making is inclusive, participative yet not intrusive taking into account conflict of interest, the number of safety committees were optimised (earlier recommended by Raja Ramanna Committee constituted by Chairman, AEC for review of the functioning of AERB);
(iii) document development process, licensing process, regulatory inspection process, management of off-site emergency were streamlined;
(iv) annual programme for obtaining regulatory experience feedback from licensee organisation was instituted;
(v) regulatory interfaces with national agencies for management of cross-cutting areas were strengthened;
(vi) streamlining and formalisation of Human Resource Development (HRD) programmes (promotion, competence building, knowledge management) initiated.

This step facilitated better understanding of interfaces of regulatory processes and thereby helped in development of formal IMS fulfilling all the applicable requirements from GSR Part-2. The IMS development included (1) identification of regulatory processes in alignment to AERB's mission, vision and mandate; management processes to fulfil organisational expectations; and activities for administrative support, (2) classifying and categorising processes and providing management expectations, (3) analysing organisational framework and allocation of responsibilities and authorities for implementing the processes. The IMS brought all the processes and activities under its purview into single framework. Periodic assessment of IMS and its processes was required to be performed in order to identify opportunities for improvements and using those opportunities to strengthen its processes. This activity was built into AERB's IMS with the provision for periodic audits, self-assessment, review and corrective measures. Integrated management system was implemented through a series of documents arranged in three levels of hierarchy viz IMS L-I, L-II & L-III. This hierarchy is based on modular approach considering the distributed responsibility and ease in implementation.

The Board of AERB reviewed and approved the IMS Level-I document for its implementation and framing the necessary supporting documents at Level-II and Level-III in March 2018. The first IMS Level-I was issued on May 3, 2018 and with minor editorial amendments, was re-issued on July 31, 2018. Consequently, AERB withdrew its ISO-QMS programme. The basic premise on which it is founded is customer satisfaction (and customer gets defined as licensee as per ISO:9000 in case

of AERB), which after detailed deliberation was found not suited with the mission and mandate of AERB.

The first version of IMS was based on guidance available in IAEA's GSR part 2 which was focussed on IMS of utilities. However, AERB developed its own document customised for AERB's functioning based on its experience and value judgment. Later, in late 2018, IAEA came out with specific documents on management system for regulatory bodies viz. GSG-12 "Organisation, Management and Staffing of the Regulatory Body for Safety" and GSG-13 "Functions and Processes of the Regulatory Body for Safety".

The prevailing version of IMS issued in 2018 was put into trial use after developing systematic execution level supporting documents. Based on experience gained and challenges faced during development of various supporting documents at Level-II and Level-III and their implementation, the need was felt for rearrangement of contents and some additions towards completeness and more coherent operation of various processes. Accordingly, in January 2020, the IMS Committee was again tasked with the revision of IMS Level-I for addressing the following major aspects :

(1) Rearrangement of organisational policies and aligning organisational strategies with them;
(2) Including process governing policies which come under purview of the Board;
(3) Spelling out strategies necessary for supporting regulatory processes;
(4) Incorporating a chapter on systematic approach for decision making;
(5) Providing more clarity on (a) audit of IMS implementation and (B) Self-assessment of individual processes.

A comparative study of IMS with the IAEA GSG-12 and IAEA GSG-13 documents was also carried out and was mostly found to be in agreement with a minor need for re-categorisation of certain activities as associated regulatory processes. These changes were incorporated in revised Level-I of IMS. The document was further reviewed at divisional level within AERB. Subsequently, Executive Committee (EC) of AERB extensively examined and reviewed the document in series of meetings. During EC review, it was confirmed that the proposed allocation of decision making responsibility is in accordance with previous Board deliberations and the review levels are in line with AERB/SG/G-1, G-2 and G-3. Shri J.Koley with team of officers namely, Shri Soumen Sinha, Shri Susheel Kumar, Shri S.P.Lakshmanan and Smt Soumya Varghese contributed significantly towards revision of IMS Level-1 document. Shri D.K.Shukla, then Executive Director, AERB was actively involved in the process and provided valuable guidance on day-to day basis. Shri G. Nageswara Rao, then Chairperson, AERB inspired the team to complete the work in a structured and timely manner.

The Level-I of IMS (Revision-1) addressing above areas and findings, was approved by the Board in January, 2021. Consequent to the revision of IMS L-I document, necessary changes were incorporated in Level-II and in Level-III documents of IMS. In February 2022, a Working Group was constituted by Shri C.S. Varghese, then Executive Director, AERB to suggest amendments as necessary in view of organisational changes like creation of Emerging Reactor Technology & Strategy Division (ERSD) and Legal and Security Cell. Consequential amendments were issued internally on March 30, 2022.

The experience of implementation of IMS in AERB over last few years reflected the need for few changes/rearrangement in the scope, content and coverage in

various Levels of IMS documents (L-I, L-II, L-III) for coherency, better clarity and providing necessary flexibility to cater to anticipated circumstances and demands. Further, while the previous exercise of mapping of the contents of AERB-IMS showed adequate coverage of the contents of IAEA documents, it was realized that the contents of the IMS documents can be further improved upon and better structured. With the implementation of IMS, the interfaces between the divisions are well defined and streamlined, making some of the functional blocks in the organisation created for this purpose, redundant. With these considerations, the organisational structure was revisited.

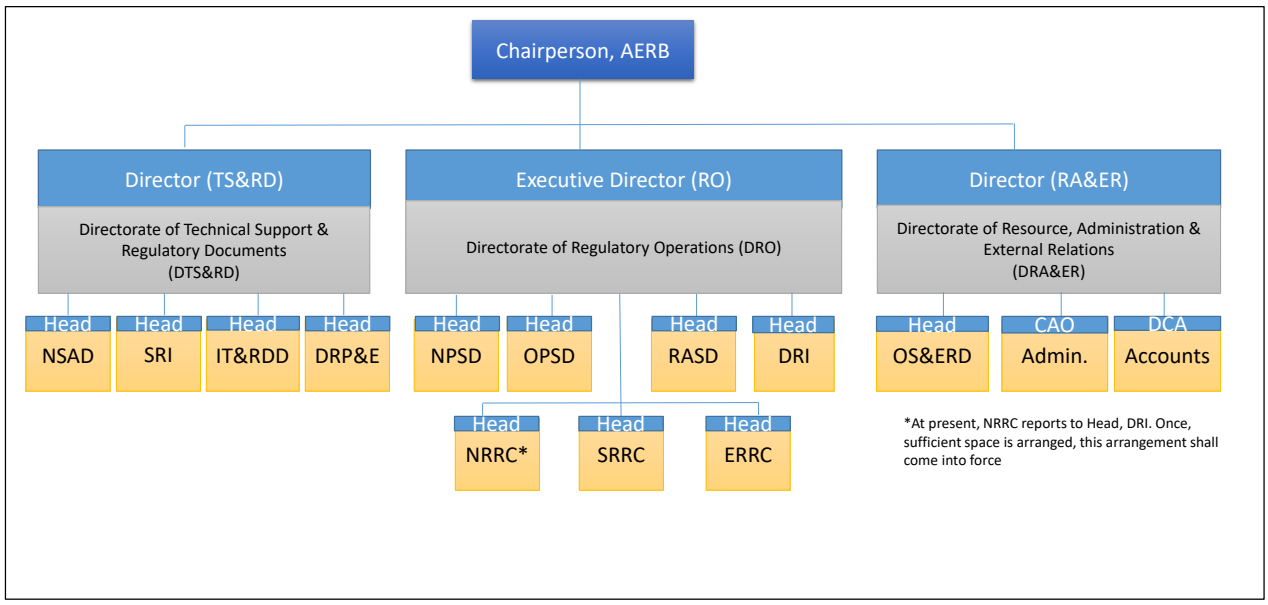
Based on the above experience feedback, a need was felt for restructuring of IMS to reflect the understanding evolved on fundamental concepts for designing and developing IMS. With this maturity, under the patronage of Shri D.K.Shukla, Chairperson, AERB, comprehensive revision was taken up with a view to address the gaps identified, detailed explanation of concepts for improved clarity, and to provide flexibility to cater to anticipated circumstances and demands. In August 2023, an Advisory Task Group for revision of IMS was constituted by Chairperson, AERB and the IMS Standing Committee constituted in February 2023 to oversee supervision of IMS was renamed as AERB IMS implementation committee.

In the absence of a dedicated group for taking up the revision of IMS, to begin with, few members of IMS-Implementation Committee, namely Shri J.Koley, Head, OPSD, Shri Soumen Sinha, DRA&ER and Shri Susheel Kumar, NSAD were engaged in re-writing the chapters of IMS Level-I under the guidance of Chairperson, AERB and the revised chapters were discussed in IMS-Advisory Task Group. However, with the constitution of Directorate of Regulatory Affairs & External Relations (DRA&ER), the development, sustaining and improving management processes for carrying out regulatory mandate and evaluation of effectiveness of IMS was entrusted to DRA&ER. Hence, to complete the work of revision of IMS Level-I in a time bound manner, DRA&ER was tasked with taking up the revision work in a project mode in April 2024.

As IMS concerns all employees in AERB, the proposed changes in IMS was done in an inclusive manner with participation of all its employees. For this purpose, a dedicated space in AERB's intranet portal was created. The revised chapters of IMS Level-I (now named as 'IMS of AERB' which is the governing document) were uploaded progressively. About 1900 comments were received from the employees and staff of AERB. The overwhelming suggestions received were appropriately considered in the revision of the IMS. The Board of AERB was regularly kept informed of the progress in revision of the IMS. In December 2023, Board was also briefed of the revised Organisational framework being proposed that would provide necessary flexibility to cater to anticipated circumstances and demands, with provision for setting up an organisational structure within the approved organisational framework.

The final version of the governing document titled 'IMS of AERB', developed with the experience gained on trial use of previous versions of IMS, was approved by the Board on February 14, 2025 for implementation in AERB. The governing document on 'IMS of AERB' will be supported by IMS implementation documents at three levels i.e. Level-1, Level-2 and Level-3, as described in the governing document.

Organisational Structure of AERB's Secretariat
(as per Office Order No. 09/2025 issued on May 14, 2025)



Name of Directorates/Divisions	Main responsibility
DRO: Directorate of Regulatory Operations	• Licensing - Consenting/licensing of Facilities and activities - Approval of equipment/package design/shipment - Approval/certification of personnel (Management position, Operator, RSO, QA, competent persons) - Approval of licensing basis documents (Tech Spec. EPR plans, RPP manual, etc.) - Authorisation for disposal/transfer of radioactive waste - NOC from safety considerations for handling prescribed substances (to DAE) - NOC for import/export of radioactive substance/radiation generating equipment • Safety review and assessment of applications/submissions • Operational safety review (periodic reports, events/modifications, etc.) • Regulatory Inspection (DRI with support from all Divisions) • Enforcement • Engagement with interested parties (licensee/professional associations/etc and safety promotional activities) • Capturing regulatory experience feedback (nationally and internationally) • Recognition of agencies/institutes

1	OPSD: Operating Plants Safety Division	Operating nuclear power plants, research / non-power reactors, fuel cycle facilities, mines & mills, NORM industries, industrial plants (and associated activities)
2	NPSD: Nuclear Projects Safety Division	Projects of nuclear power plants, research / non-power reactors, fuel cycle facilities, mines & mills, industrial plants (and associated activities)
3	RASD: Radiation Applications Safety Division	Projects and operating facilities and activities associated with radiation applications in medicine, industry, research & other societal applications, manufacturing radioisotopes & R&D centres on advanced radiation technologies (accelerators, etc.)
4	DRI: Division of Regulatory Inspection	Programming and conduct of regulatory inspections & managing resident site observer teams
5	SRRC: Southern Regional Regulatory Centre, Chennai	Support in Regulation of nuclear, radiation & industrial facilities in southern region
6	ERRC: Eastern Regional Regulatory Centre, Kolkata	Support in Regulation of nuclear, radiation & industrial facilities in eastern region
7	NRRC: Northern Regional Regulatory Centre, New Delhi	Support in Regulation of nuclear, radiation & industrial facilities in northern region
DTS&RD: Directorate of Technical Support & Regulatory Documents		• Regulatory document development • Providing technical support to regulatory and management processes through - Safety research and analysis - Information technology & advanced digital technologies - Nuclear Security review - Review of reactor physics - Safety review aspects related to radiation protection, radioactive waste management, environmental impact, emergency preparedness & response plans and exercises • Coordination & Monitoring of Research Funding & Grant-in-Aid activity of AERB • Monitoring the progress of emergency situation and the response actions & management of NREMC • IT support and services to AERB • Development of IT based platforms for Records and Information management, Regdocs portal, employee survey, etc.
1	NSAD: Nuclear Safety Analysis Division	• Conduct of assigned safety analysis and safety review. • Development & Maintenance of Computer codes. • Preparation of repository of inputs decks and associated documentation
2	SRI: Safety Research Institute, Kalpakkam	• Conduct & coordination of safety research and assigned safety review & analysis. • Preparation and maintenance of research database. • Coordination & Monitoring of Research Funding & Grant-in-Aid activity of AERB
3	IT&RDD: Information Technology & Regulatory Documents Division	• Regulatory document development & revision • Review of Nuclear Security (including cyber security)

		• Information technology (including computer programming) & advanced digital technologies • IT support and services • Development of IT based platforms for Records and Information management, regdocs portal, employee survey, etc
4	DRP&E: Division of Radiation Protection & Environment	• Support in safety review aspects related to radiation protection, waste management, environment impact, emergency preparedness & response plans and exercises • Monitoring the progress of emergency situation and the response actions • Management of NREMC, • Crisis communication, notification of nuclear incident under CLND Act and wide publicity
DRA&ER: Directorate of Resource, Administration & External Relations		• Secretarial Support to Board of AERB • Management Functions • Functions to Support Core Regulatory Functions - Legal Support - Engagement with Interested Parties (public, media) - External Relations – Liaison with Government Ministries/Department & national & International Cooperation and assistance - Resource Management (Human resource, Finances & Infrastructure) • Administration and Accounts
1	Organisation Support & External Relations Division (OS&ERD)	• Human Resource Management • Budget financial resource, infrastructure management • Engagement with interested parties (public, media) • External relations • Legal and management support • Secretarial support to Board • IMS Documentation
2	Admin: Administration Division	Office management, establishment matters, personnel matters, general administration matters
3	Accounts: Accounts Division	Finance matters

NB:

1) All scientific and technical employees, irrespective of their divisions, are to participate in Regulatory Inspections.
2) Directorate/Divisions /Sections are formed to achieve smooth process flow and effective functioning, and should not be a constraint for intra and inter directorate/division participation for larger organisational objective.

For current organisational structure, please refer AERB's website

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Atomic Energy Regulatory Board
Government of India
Niyamak Bhavan
Anushaktinagar
Mumbai 400094, INDIA