



OCCUPATIONAL HEALTH, SAFETY

and

ENVIRONMENT

MANAGEMENT SYSTEM MANUAL

(Conforming to ISO 14001:2015
and OHSAS 18001:2007
Standards)



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STATEMENT OF AUTHORITY

All Functional Heads / In-charges of Departments are responsible for ensuring compliance to the requirements mentioned in this manual. They have the authority to form an appropriate organization for discharging their functions, responsibilities and resolving non-conformities within their departments. Head, HSE-ISG has the authority to stop any work/process which is not in accordance with this manual and/or the specified requirements.

Management Representative (MR) shall be appointed by Head, ISG, as a nodal agency for HSE Coordination, who shall have the responsibility & authority to:

- Approve, implement and maintain this manual with the objective to prevent non-conformities.
- Assess the compliance through internal audits and identify non-conformities.
- Initiate necessary corrective action with the involvement and support of all the relevant functions, monitor and verify the same.
- Provide feedback to the management about the performance of HSE Management System.

Effectiveness of this system is to be ensured by awareness and participation of all the employees of ISG

HSE Management System brought out in this manual is authorized for implementation. Any conflict with the provisions of the manual shall be referred to Head, HSE-ISGHQ for resolution.

AMENDMENT RECORD SHEET

[illegible]



DOCUMENT DISTRIBUTION LIST

1.0 D ISTRIBUTION LIST:

The master copy of this manual shall be maintained by Head, HSE-ISGHQ

Distribution list of this Manual shall be maintained under authority of MR (HSE) of the Region. Controlled copy of Manual shall be issued as per distribution list.

- 1.2 In case any department ceases to exist, the controlled copy shall be destroyed by the concerned HOD.
- 1.3 Record for issue control shall be maintained by MR (HSE) or his document control nominee as per HSE Procedure for Document Control



COMPANY PROFILE

1.0 INTRODUCTION:

Bharat Heavy Electricals Limited (BHEL), a central public sector undertaking, is an engineering and manufacturing enterprise engaged in Design, Engineering, Manufacturing, Erection, Commissioning and Servicing of a wide range of products, systems and services for the core sectors of the economy viz. power, transmission, industry, transportation, renewable energy, oil & gas and defence. Established in 1964, company has registered multi-dimensional growth over the decades. It was granted the prestigious status of **Maharatna** company in 2013 by Govt. of India for its outstanding track record and vast scale of operations. Today, BHEL is one of the leading companies in the field of power plant equipment manufacturing, not only in domestic but also in international market. With its corporate office located in New Delhi, BHEL caters to the requirements of its customers through a widespread network of 17 Manufacturing Units, 02 Repair Units, 04 INDUSTRIAL SYSTEMS GROUP, 08 Service Centres, 06 Overseas Offices, 06 Joint Ventures and 15 Regional Marketing Centres. Though, BHEL is a multi-product company producing a variety of electrical, electronic and mechanical equipment for all sectors, the bulk of company's revenue is derived from sale of power generation equipment such as Boilers, Turbines and Generators etc. As of 2017, BHEL supplied equipment contribute to about 55% of the total installed power generation capacity of India.

BHEL, shares the growing global concern on issues related to Occupational Health, Safety & Environment, is committed to provide safe and healthy working environment to all its stakeholders and to protect environment in and around the company's establishment.

2.0 INDUSTRIAL SYSTEMS GROUP

INDUSTRIAL SYSTEMS GROUP (ISG), a business sector of BHEL has its Head Quarters at Sirifort, New Delhi. It is engaged in installation and servicing of equipment pertaining to thermal, hydro, nuclear, gas and combined cycle power plants. ISG has 4 regions (ISG) - Northern Region headquartered at Noida, Eastern Region Headquartered at Kolkata, Western Region Headquartered at Nagpur and Southern Region Headquartered at Chennai.

INDUSTRIAL SYSTEMS GROUP has adopted an integrated approach to establish and implement Environmental Management System conforming to ISO 14001:2015 and Occupational Health & Safety Management System conforming to OHSAS 18001:2007. The integrated manual shall be referred as Occupational Health, Safety and Environmental Management System Manual.



HSE Management System Manual has been developed for compliance and effective implementation in all operations of the regions and provides a structured process for achievement of continual improvement. The system facilitates risk management, planning, control, monitoring, corrective action, auditing and review of activities under active leadership at all levels to ensure that occupational health, safety and environment policy is complied with and the system is capable of adapting to changing circumstances.

ACTIVITY / SERVICE PROFILE

Principal Product and services:

Product profile includes installation of different ratings of Thermal, Hydro, Nuclear, Gas Turbine and Combined Cycle Projects.

The range of services provided by ISG are:

- Installation (erection and commissioning) of Power Projects.
- Service-After-Sales (Overhauling) of BHEL and Non-BHEL equipment.
- R&M/RLA of Power Plants
- Trouble shooting service for BHEL & Non-BHEL sets
- Expert service like Slow Speed balancing of rotors, EL CID test on generator stator etc.
- AMC and Condition monitoring of Power Plants

RESOURCE CONSERVATION:

- Various projects for conservation of critical resources like energy & water are encouraged by INDUSTRIAL SYSTEMS GROUP.
- Sign boards are also displayed at different places to bring awareness among people regarding conservation of resources.
- Scrap generated at project sites are collected, segregated & disposed in a systematic way. This system has yielded in increased rate of realization.
- Consumables like Oils / Chemicals are treated / reused for conservation of resources & reduction of pollution.
- Recycling of used consumables is done in an environmentally friendly manner
- Tree Plantation activity is encouraged at all project for rejuvenation of immediate environment



SCOPE

The HSE Management System Manual covers the, Occupational Health, Safety, and Environmental Management System requirements of BHEL, INDUSTRIAL SYSTEMS GROUP and specifically its operations across various project execution sites through INDUSTRIAL SYSTEMS GROUP, and follows the specification set by:

OHSAS 18001: 2007 Occupational Health and Safety Management Systems-Requirements

&

ISO 14001:2015 Environmental Management Systems– Requirements with guidance for use.

This HSE Management System Manual describes the Systems & Procedures for the various activities and functions of the HSE Management System of BHEL, ISG. This HSE Management System Manual is based on the HSE related clauses of OHSAS 18001: 2007 and the ISO 14001: 2015.

This HSE Management System Manual is strictly controlled for any form of circulation and amendment. The hard controlled copies of either the HSEMS manual or the procedures shall be marked “Controlled Copy”. Only the latest revision number shall be valid for circulation and use. Head, HSE-ISGHQ shall control all amendments and revisions of the HSEMS manual. The MR (HSE) of each region shall control all issues and circulation of the manual. Controlled copies may also be accessible through the computer network or other electronic media.

All the systems & procedures referred to in this HSEMS manual have been approved by the Top Management and subsequently by the concerned authorized person for use and implementation.

This manual is applicable to all the project site and HQ activities of the four regions which covers Contracts, Purchase, HR, IT, PMX, TSX, FEX & MSX functions etc.



REFERENCE PUBLICATIONS

Guidelines for References:

ISO 14001:2015	Environmental management systems - Requirements with guidance for use.
OHSAS 18001:2007	Occupational Health and Safety Management Systems-Requirements
ISO 19011: 2011	Guidelines for auditing management systems

ABBREVIATIONS, TERMS AND DEFINITIONS

ABBREVIATIONS

HSE	Occupational Health, Safety and Environment
BC	Business Concern
CE	Chronic Effect
CPCB	Central Pollution Control Board
EMS	Environmental Management System
HOD	Head of Department
HSEMRC	Health, Safety and Environmental Management Review Committee
HSEMS	Occupational Health, Safety and Environmental Management System.
HSEMSM	Occupational Health, Safety and Environmental Management System Manual
HSEOM	Occupational Health, Safety and Environmental Operation Manual
IPC	Interested party concern
LC	Legislative concern
MA	Management Appointee
MOEF	Ministry of Environment and Forest
MRC	Management Review Committee
MR	Management Representative
OCP	Operational Control Procedure
OHS	Occupational Health and Safety
OHSAS	Occupational Health & Safety Assessment Series
P&D	Planning and Development
REF	Reference
REV	Revision
RF	Recording Format

SP	Standard Procedure
SPCB	State Pollution Control Board
TF	Task force

DEFINITIONS

(Note: The word ‘organization’ in these definitions shall refer to BHEL,ISG in the context of this document)

1	Environment - Surrounding in which organization operate, including Air, Water, Land, Natural resources, Flora, Fauna, Humans, and their interrelation.
2	Ill Health – Identified, adverse physical or mental condition arising from/or made worse by a work activity and/or work related situation.
3	Safety – Freedom from unacceptable risk or harm.
4	Health Safety & Environment(HSE) – Occupational Health , Safety and Environmental conditions and factors that affect the interested parties, well-being of employees, temporary workers, contractor personnel, visitors and any other person in workplace.
5	Continual improvement – Recurring process of enhancing the HSE management system to achieve improvements in overall environmental and occupational health and safety performance in line with the organization ‘s HSE policy. (The process need not take place in all areas of activity simultaneously).
6	Environmental Aspect – Element of organization’s activities, products or services that can interact with the environment.
7	Significant Environmental Aspect – A significant environmental aspect is an environmental aspect that has or can have a significant environmental impact.
8	Environmental Impact - Any change to the environment, whether adverse or beneficial, wholly or partially resulting from organization’s activities, products or services.
9	Occupational Health Safety & Environmental Management System - The part of the overall management system that includes structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing and maintaining the HSE policy.
10	HSE Objectives - Overall HSE goals arising from the organization’s context, needs of interested parties, HSE policy, and organizational goals that the organization sets for itself to achieve HSE performance, which is quantified where practicable. Objectives must be SMART (Specific, Measurable, Achievable, Realistic, Time-Bound)
11	HSE Policy – Statement by top management of its intentions and principles in relation to its overall environmental, occupational health and safety performance, which provides a framework for action and for the setting of its HSE objectives and targets.
12	HSE Targets – Detailed performance requirement, quantified where practicable, applicable to the organization. HSE objectives need to be set and met in order to achieve objectives.
13	Interested Party – Individual or group concerned with or affected by the HSE performance of the organization.

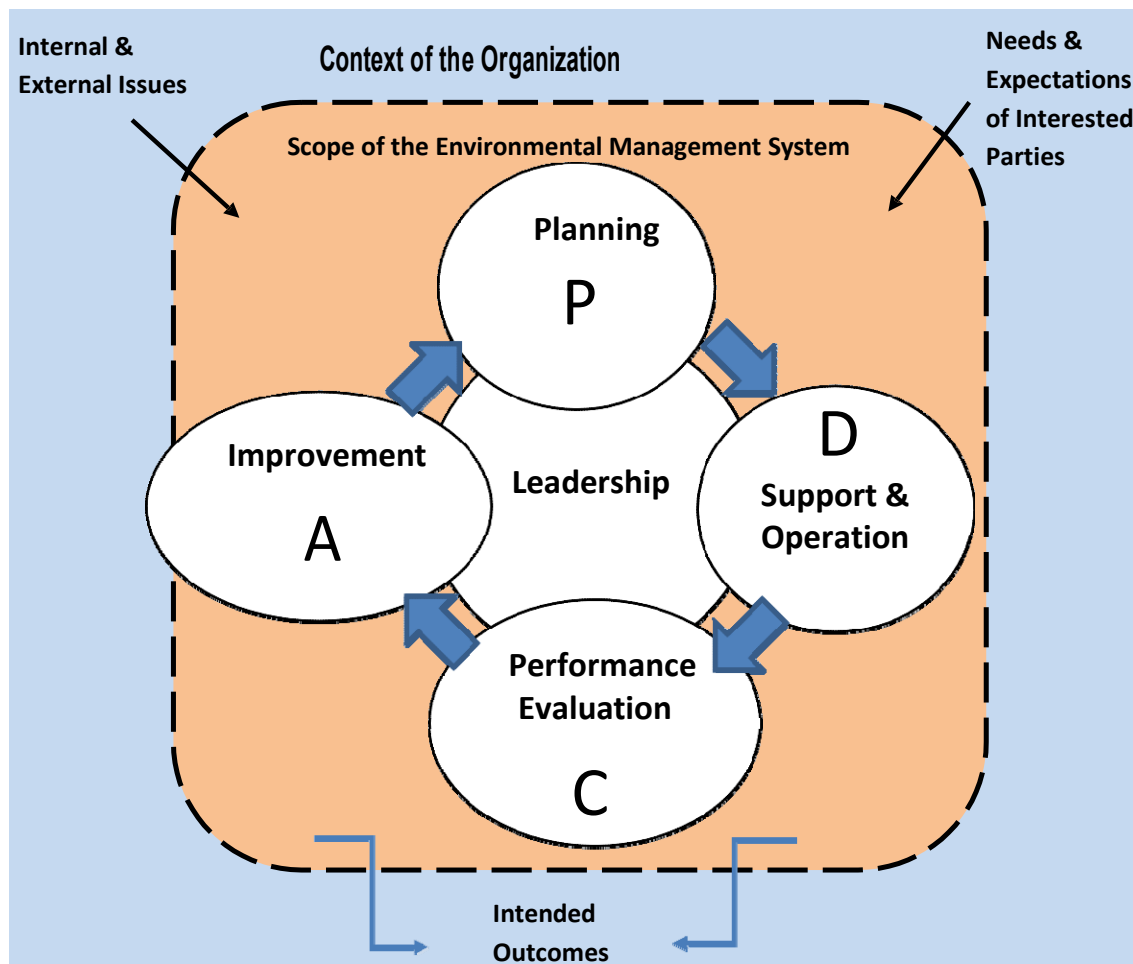
14	Accident – Undesired event giving rise to death, ill health, injury, damage or other loss.
15	Incident – Work- related event(s) in which an injury or ill health (regardless of severity) or fatality occurred, or could have occurred.
16	Near Miss Incident – An incident where no ill health, injury, damage or other loss occurs, but it had a potential to cause, is also referred to as “Near-Miss incident”.
17	Hazard – Source, situation or act with a potential for harm in terms of human injury or ill health or a combination these.
18	Risk – Combination of the likelihood and consequences of an occurrence of hazardous event or exposure(s) and severity of injury or ill health that can be caused by the event or exposure(s).
19	Risk Assessment – Overall process of estimating the magnitude of risk and deciding whether or not the risk is tolerable.
20	Acceptable Risk – Risk that has been reduced to a level that can be tolerated by the organization with regard to its legal obligations and HSE Policy
21	Hazard identification – Process of recognizing that a hazard exists and defining its characteristics.
22	Non-Conformity – Non-fulfilment of a requirement. Any deviation from work standards, practices, procedures, regulations, management system performance etc. that could either directly or indirectly lead to deviation from the organization HSE policy, or lead to injury, illness, property damage to the workplace environment, or a combination of these.
23	Performance – Measurable results of the HSE management system, related to the organization’s control of environmental aspects & OHS Risks, based on the organization’s HSE Policy & Objectives.
24	Auditor - The person with the competence to conduct the auditing.
26	Document - Information and its supporting medium. The medium can be paper, magnetic, electronic or optical computer disc, photographs or master sample or a combination thereof.
27	Internal Audit – Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively by the organization to determine the extent to which the requirements of the system are fulfilled.
28	Preventive Action * – Action to eliminate the cause of potential non-conformity or other undesirable potential situation.
29	Procedure – Specified way to carry out an activity or process. Procedure can be documented or not.
30	Records – Document stating results achieved or providing evidence of activities performed.
31	Workplace – Any physical location in which work related activities are performed under the control of the organisation
32	Continual Improvement –Recurring activity to enhance performance.
33	Interested Party –Person or organization that can affect, be affected by or perceive itself to be affected by a decision or activity
34	Performance –Measurable result
35	Audit -Systematic, independent and document process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled
36	Competence -Ability to apply knowledge and skills to achieve desired results

37	Compliance Obligations (Legal and other Requirements)-Legal requirements that an organization has to comply with and other requirements that the organization has to or chooses to comply with
38	Conformity -Fulfilment of a requirement
39	Corrective Action -Action to eliminate the cause of a non-conformity and to eliminate recurrence
40	Documented Information -Information required to be controlled and maintained by an organization and the medium on which it is contained
41	Effectiveness -Extent to which the planned activities are realized and planned results achieved
42	Environmental Condition -State or characteristic of the environment as determined at a certain point in time
43	Environmental Management System -Part of the management system used to manage environmental aspects, fulfil compliance obligations and address risks and opportunities
44	Environmental Objective -Objective set by the organization consistent with its environmental policy
45	Environmental Performance -Performance related to the management of environmental aspects
46	Indicator -Measurable representation of the condition or status of operations, management or conditions
47	Lifecycle -Consecutive and interlinked stages of a product (or service) system, from raw material acquisition or generation from natural resources to final disposal
48	Major Accident -Accident in which the victim failed to report to duty within 48 hrs due to extent of injury
49	Measurement -Process to determine a value
50	Monitoring -Determining the status of a system, a process or an activity
51	Objective -Result to be achieved
52	Outsource -Make an arrangement where an external organization performs part of and organization's function or process
53	Prevention of Pollution -Use of processes, practices, techniques, materials, products, services or energy to avoid, reduce or control (separately or in combination) the creation, emission or discharge of any type of pollutant or waste in order to reduce adverse environmental impacts
54	Process -Set of interrelated and interacting activities which transforms inputs to outputs
55	Requirement -Need or obligation that is stated, generally implied or obligatory

(* Depreciated in latest version)

System No. HSEMSM: 4.0

CONTEXT OF THE ORGANIZATION



UNDERSTANDING THE CONTEXT OF THE ORGANIZATION

1. PURPOSE:

To understand and document the context, i.e. internal and external issues that are relevant to BHEL, INDUSTRIAL SYSTEMS GROUP and that have a direct influence on the organization, and the effectiveness of the occupational health, safety & environmental management and an impact on the global environment and sustainability issues.

2. SCOPE:

Applicable to all the activities / product and services at BHEL, ISG.

3. RESPONSIBILITY:

Task Force

4. PERFORMANCE CRITERIA:

Documented Internal & External Issues (context).

5. CROSS REFERENCE:

ISO 14001:2015 – Clause 4.1: Understanding the organization & its context.

6. PROCEDURE:

The relevant issues are identified through deliberation and discussions with the departments and stakeholders of the organization.

The relevant issues are listed below.

EXTERNAL ISSUES (in no specific order)

S. No.	External issues as identified	Addressed through
1	Compliance to Statutory and Regulatory requirements	All concerned departments like HR, Q & S, Sites, Law
2	Market Trend & Competitive Pricing	Commercial & RSC
3	Customer expectations and customer interface	All concerned departments like Commercial, RSC, Projects & Site
4	Standardization and certification	Q&S, HR & Admin., Site & IT

5	External Inspections / Audits	All concerned departments
6	Corporate Social Responsibility	HR
7	Social Environment	HR
8	Political Environment (Domestic & International)	Commercial
9	Global environmental concerns affecting traditional business	Hydro, Nuclear, Transportation and other groups exploring business opportunities in new areas
10	Impact of activities on local environment and populace	Site HSE & HR

INTERNAL ISSUES (in no specific order)

S. No.	Internal issues as identified	Addressed through
1	Organization Culture which includes its Vision, Mission & Values	Corporate Strategic Management Committee
2	Organizational Structure	All departments
3	Roles of personnel within organization	All departments
4	Contractual agreements with collaborators	Lead MUs, Project Management & Sites
5	Qualified, Reliable and Competent Employees	Qualified and Reliable - HR Competent – HR & All departments
6	Overall Business Strength	Corporate BHEL
7	Relationship with Suppliers	Project Management, SCT/ Purchase, Site
8	HR Policy	HR
9	Strategies	MSX
10	Process for resolving conflicts	HR related-HR, Customer Contract Related- Commercial, Procurement related- SCT & Purchase
11	Rising input cost	SCT & Purchase

12	Cash Collection / Payment Realization	Projects/ Sites/Contract Closing
13	Timely Contract Closing	Projects / Sites / Contract Closing
14	Storage and Preservation	Sites / Projects
15	Health, Safety & Environment at project Site	Sites HSE and Execution
16	Quality at Project Sites	Site Quality and Execution
17	Low order in hand	Commercial/ Corp-Marketing
18	Surplus Manpower	HR
19	Delay in flow of information between MUs / Sites / Departments	All concerned departments
20	Maturity level i n tec hnology abs orption of supercritical technology	TSX with PSTS

7. RECORDS:

Record Title	Location	Responsibility	Retention Time
Updated list of External & Internal Issues as part of this HSEMSM	Head, HSE-ISGHQ's office	Head, HSE-ISGHQ	-

8. VERIFICATION & CORRECTIVE ACTION:

This list shall be kept updated with any new issues identified in due course of time by Head, HSE-ISGHQ in consultation with ISG.



UNDERSTANDING THE NEEDS AND EXPECTATIONS OF INTERESTED PARTIES

1. PURPOSE:

To understand and document the needs and expectations of interested parties / stakeholders relevant to the occupational health, safety & environmental management system.

2. SCOPE:

Applicable to all the activities / product and services at BHEL, ISG

3. RESPONSIBILITY:

Task Force

4. PERFORMANCE CRITERIA:

Documented details of interested parties.

5. CROSS REFERENCE:

ISO 14001:2015 – Clause 4.2: Understanding the needs and expectations of interested parties.

6. PROCEDURE:

The interested parties are identified through deliberation and discussions with departments of the organization.

Identified interested parties are listed below

Interested Parties	Needs Expectations as identified	Needs and Expectations met through
Customers	Quality, Price, Delivery and Service	1. High quality & reliable product & services 2. Timely / Sequential delivery of projects under commissioning as per PMG schedule 3. Low cost service & product 4. Prompt & efficient service after sales 5. Timely resolution of customer complaints 6. Customer requirements addressed through Customer Meetings, Management Quality Committee, Management Committee Meeting
Employees	Proper Work	1. Management Committee Meeting at board level

	Environment, Professional Development, Health & Safety Recognition & Reward	2. Open Forums 3. E-Map / Performance Appraisal System 4. Medical Facilities 5. Improvement Projects Reward Scheme System (IMPRESS), Suggestion Scheme 6. Employee Satisfaction Survey
Shareholders	Sustained Profitability	1. MoU with GOI 2. SEBI Guidelines 3. Company Act
Suppliers	Mutual benefits, Transparency, Prompt Payment	1. e-Payment for suppliers 2. Vendor Satisfaction Survey 3. Vendor Meet
Society	Environmental Protection, Ethical behaviour	1. Activities under Corporate Social Responsibility 2. Environment protection through tree plantation
Law enforcers / Regulators	Identification of and adherence to applicable statutory and regulatory requirements	1. Compliance with statutory and regulatory requirements through Register of Regulations 2. All kind of taxes paid
Contract Workers & Families	Ensuring Health & Safety at workplace	Ensured through implementation of HSE Management System at Project Sites
Local population at project sites	Development works & protection of environment	1. CSR 2. Active measures for environmental protection by Site HSE as per HSEMS

7. RECORDS:

Record Title	Location	Responsibility	Retention Time
Updated list of Interested Parties / Stakeholders as a part of this HSEMSM	Head, HSE-ISGHQ's office	Head, HSE-ISGHQ	-

8. VERIFICATION & CORRECTIVE ACTION:

This list shall be kept updated with any new issues identified in due course of time by Head, HSE-ISGHQ in consultation with ISG.



System No. HSEMSM: 4.3

DETERMINING THE SCOPE OF OCCUPATIONAL HEALTH, SAFETY & ENVIRONMENTAL MANAGEMENT SYSTEM

1. PURPOSE:

To determine the boundaries of the occupational health, safety & environmental management system and to establish its scope.

2. SCOPE:

Applicable to all the activities / product and services at BHEL, ISG.

3. RESPONSIBILITY:

Task Force

4. PERFORMANCE CRITERIA:

Documented scope.

5. CROSS REFERENCE:

ISO 14001:2015 – Clause 4.3: Determining the scope of the occupational health, safety & environmental management system.

6. PROCEDURE:

The scope of implementation of this manual shall cover the areas of operations desired to be certified by the organization and shall include all activities and process within those areas. Any new activities and processes in those areas shall automatically become part of scope. In case, new areas of operations are to be added, the scope shall be duly revised by the management.

The scope of this Occupational Health, Safety & Environmental Management System is defined as follows:

“The HSE Management System Manual covers the, Occupational Health, Safety, and Environmental Management System requirements of BHEL, INDUSTRIAL SYSTEMS GROUP and its operations across various project execution sites throughout the INDUSTRIAL SYSTEMS GROUP, and follows the specification set by:

OHSAS 18001: 2007 Occupational Health and Safety Management Systems-Requirements

&

ISO 14001:2015 Environmental Management Systems– Requirements with guidance for use.”



This HSE Management System Manual describes the Systems & Procedures for the various activities and functions of the HSE Management System of BHEL, ISG. This HSE Management System Manual is based on the HSE system related clauses of OHSAS 18001: 2007 and the ISO 14001: 2015.

7. RECORDS:

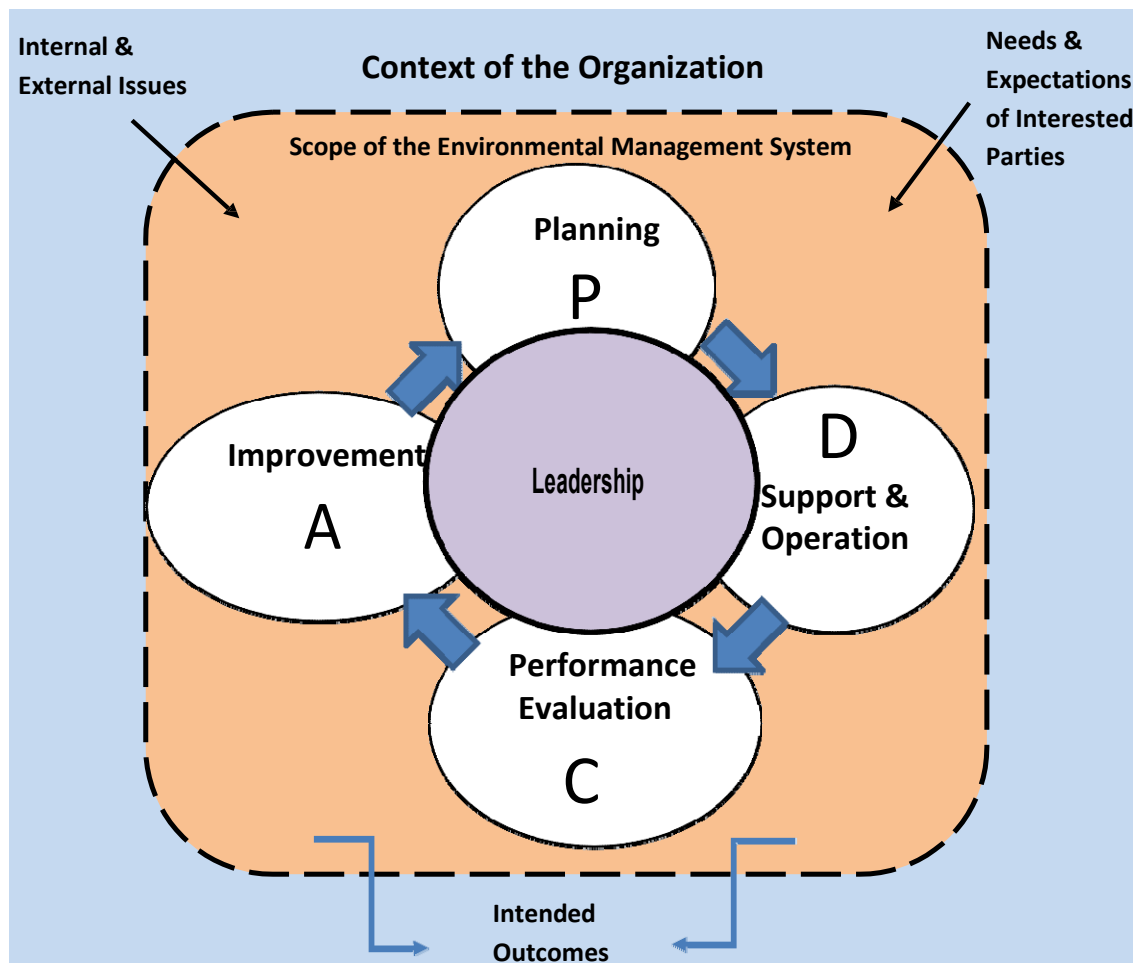
Record Title	Location	Responsibility	Retention Time
Updated scope of implementation of this HSE Management System Manual as part of this HSEMSM	Head, HSE- ISGHQ's office	Head, HSE- ISGHQ	-

8. VERIFICATION & CORRECTIVE ACTION:

The scope shall be kept updated by Head, HSE-ISGHQ in consultation with ISG.

System No. HSEMSM: 5.0

LEADERSHIP





LEADERSHIP AND COMMITMENT

1. PURPOSE:

This system identifies the responsibility of top management of BHEL, ISG in implementation of the systems and procedures of this HSE Management System Manual.

2. SCOPE:

Applicable to all the activities / product and services at BHEL, ISG.

3. RESPONSIBILITY:

Top management of BHEL, ISG including ISG & Project Sites

4. PERFORMANCE CRITERIA:

Organization-wide implementation of this HSEMS

5. CROSS REFERENCE:

ISO 14001:2015 – Clause 5.1: Leadership and Commitment.

OHSAS 18001:2007

6. PROCEDURE:

The top management of BHEL ISG, that includes Head, ISG and Head, ISG, Head, Project-Sites is directly responsible for the implementation of the systems and procedures of this HSE Management System Manual, framed in accordance with the requirements of OHSAS 18001:2007 and ISO 14001:2015.

The top management may delegate these responsibilities to others but it retains accountability for ensuring the actions are performed

There are however, specific responsibilities designated, in which the top management has to be personally involved.

Detailed responsibilities are indicated in **System No. HSEMSM:5.3, Organizational Roles, Responsibilities and Authorities**

7. RECORDS:

Record Title	Location	Responsibility	Retention Time
Various Records as per provisions of other systems of this HSEMSM, pertaining to top management including resource allocation, minutes of Management Committee Meetings, Safety Reviews etc.	As per respective systems	As per respective systems	As per respective systems

8. VERIFICATION & CORRECTIVE ACTION:

To be verified through various records mandated as per other systems of this HSEMSM as proof of commitment of top management.



System No. HSEMSM: 5.2

HSE POLICY**1. PURPOSE:**

To define Occupational Health, Safety & Environmental (HSE) Policy of BHEL, INDUSTRIAL SYSTEMS GROUP, as the commitments in which the top management outlines the intentions of the organization to support and enhance its HSE performance.

2. SCOPE:

Applicable to all the activities, products, services, OHS hazards / risks, environmental aspects /impacts of BHEL,ISG

3. RESPONSIBILITY:

- Defining / authorizing HSE Policy - Head (ISG) - Task
- To implement procedures for defining HSE policy Force
- To follow HSEMSM - All Employees

4. PERFORMANCE CRITERIA:

Defined HSE policy.

5. CROSS REFERENCE:

- ISO 14001: 2015 - Clause 5.2: Environmental Policy
- OHSAS 18001:2007 - Clause 4.2: OH&S Policy
- Register of Regulations
- Register of OHS Hazards and Risks
- Register of Environmental Aspects and Impacts
- Register of organizational risks & Opportunities

6. PROCEDURE:

Cl. No.	Activity	Responsibility
5.2.1	Establish the HSE policy by considering: • Context of BHEL, ISG • Interested parties of BHEL, ISG • Significant environmental aspects and OH&S Hazards • Applicable legal and other requirements • Past and present HSE performance with opportunities and needs for continual improvement • Resources required • Discussions with Head(ISG), MRC, core team and employees in particular	Task Force (formed by Head, HSE- ISGHQ comprising members from all ISG)
5.2.2	While framing and drafting HSE policy ensure that it:	Task Force

	- Is appropriate to the purpose and context of the BHEL, ISG including the nature, scale and environmental impacts and occupational health and safety risks of activities, products and services - Provides a framework for setting HSE objectives - Includes a commitment to continual improvement in HSE, prevention of pollution and prevention / control of OHS risks - Includes a commitment to comply with applicable HSE regulations - Provides to strengthen awareness and training while seeking cooperation from the employees - Is easily documented, implemented, maintained and communicated to all employees and external interested parties. - Is made available to the public / interested parties as and when required	
5.2.3	Prepare and send the final draft of HSE policy to Head (ISG) for approval and issuance	Head, HSE-ISGHQ
5.2.4 A	Approval of HSE Policy	Head(ISG)
5.2.5	Communicate the authorized policy to all concerned (employees and external interested parties) as per procedure for communication	MR(HSE) / HODs /Head(SOXs) / HSE Co-ordinators
5.2.6	The HSE policy shall be reviewed periodically during management reviews as per procedure for Management review for compliance and relevance / updates	MRC/Task Force

7.0 RECORDS:

Record Title	Location	Responsibility	Retention Time
INDUSTRIAL SYSTEMS GROUP HSE Policy	Head, HSE-ISGHQ 's Office	Head, HSE-ISGHQ	-

VERIFICATION & CORRECTIVE ACTION:

All employees at BHEL, ISGs shall follow the requirement of this HSE policy. The respective HOD/ Head (SOX) shall ensure risk management & corrective action as per HSE Management System Manual (Doc. No.: HSE: MSM). In case any deviation is observed, MR (HSE) and respective HSE Co-ordinators shall ensure implementation of this HSE policy.



INDUSTRIAL SYSTEMS GROUPHSE Policy

We, at BHEL INDUSTRIAL SYSTEMS GROUP, reaffirm our belief that the Health and Safety of our stakeholders and conservation of Environment is of utmost importance and takes precedence in all our business decisions. In pursuit of this belief and commitment, we strive to:

- ✓ Ensure total compliance with applicable legislation, regulations and other requirements concerning occupational health, safety and environment.
- ✓ Prevent injury and ill-health of all employees & contract workers across all operations
- ✓ Prevent damage to environment across all operations
- ✓ Ensure continual improvement in the occupational health, safety and environment Management system performance.
- ✓ Enhance occupational health, safety and environment awareness amongst employees, customers and suppliers by proactive communication and training.
- ✓ Review periodically and improve occupational health, safety and environment Management system to ensure its continuing suitability, adequacy and effectiveness in a continuously changing business environment.
- ✓ Develop a culture of safety through active leadership and provide appropriate training at all levels to enable employees to fulfil their Health, Safety and Environmental obligations.
- ✓ Incorporate appropriate Occupational Health, Safety and Environmental criteria into business decisions for selection of plant, technology and services as well as appointment of key personnel.
- ✓ Ensure availability at all times of appropriate resources to fully implement the Occupational Health, Safety and Environmental policy of the company.

This policy will be communicated to all employees and made available to interested parties.



ORGANIZATIONAL ROLES, RESPONSIBILITIES AND AUTHORITIES

1. PURPOSE:

- To define role, responsibilities, accountabilities, authorities at all levels of BHEL, ISG for effective functioning of HSEMS.
- To appoint MR (HSE) for effective design, implementation, maintenance and improvement of HSEMS.

2. SCOPE:

Applicable to all activities, products & services of BHEL, ISG.

3. RESPONSIBILITY:

	At ISG	At ISG-HQ	At Project Sites
Define roles, responsibility, accountability & authority	Head	Head (ISG)	Site In-charge
Appoint MR(HSE)	Head	-	-

4. PERFORMANCE CRITERIA:

- Updated Organisation Chart with details of HSE organization at all levels.
- Defined and documented roles, responsibility and authorities for all levels of employees
- Understanding of roles, responsibilities and authorities by all levels of employees
- Circular of appointment of MR(HSE)
- Circular of MRC committee.

5. CROSS REFERENCES:

- ISO-14001: 2015- Clause: 5.3, Organizational roles, responsibilities and authorities.
- OHSAS – 18001 (2007): Clause – 4.4.1, Resources, roles, responsibility, accountability and authority
- HSE Policy.

6. PROCEDURE

(Note – These are high level responsibilities. Other responsibilities are detailed in various systems of HSEOM)

Cl. No.	Level / Designation	Responsibilities
	Head, INDUSTRIAL	- To approve HSE policy - To approve HSEMS Manual - To provide necessary resources in order to meet objectives and targets of this HSEMSM. - To approve and if required, review the organisation structure and roles, responsibilities, accountabilities and authorities of Key personnel in order to ensure effective implementation of this HSEMSM.
	Head, HSE-ISGHQ	- To act on behalf of Head (ISG) on HSE issues. - To constitute HSE Task Force. - To promote awareness amongst employees on HSE Management system - To establish, implement, maintain and up date HSE Management system manual. - To set objectives and targets in B SC in consultation with ISG-MSX and get approval of Head (ISG) - To facilitate formulation of HSE Management programs and get approval of Head (ISG) - To evaluate HSE performance reports vis a vis objectives and targets
	HSE Task Force	- To formulate and review HSE policy. - To develop and review HSEMSM for the ISG. - To develop and maintain HSE Procedures. - To identify applicable legislative and other requirements and update register of regulations.
	Head, INDUSTRIAL SYSTEMS GROUP	- To appoint MR (HSE) and Management Review Committee - To review and approve objectives and targets - To chair MRC meeting to review HSE management system performance - To approve organization structure and roles, responsibilities and authorities of key personnel. - To provide necessary resources to meet objectives and targets
	Management Representative	- To act on behalf of Head (Region) on HSE issues - To ensure that the HSEMS and auxiliary documents are prepared, reviewed and approved, then issued to relevant user, reviewed periodically and revised incorporating changes as prompted by changes in statutes, reference standards, closing of audit points and feedback from operations. - To promote awareness amongst employees on HSE Management system

		- To review and prioritize significant environmental aspects and OHS hazards - To set objectives and targets in BSC in consultation with HOFs and get approval of Head (Region) - To facilitate formulation of HSE Management programs and get approval of Head (Region) - To evaluate HSE performance reports vis a vis objectives and targets - To generate Management information report on implementation status for management review - To organize HSE audits and ensure identification and implementation of required corrective actions - To organise Management Review Committee Meeting to review HSE performance half yearly - To co-ordinate with certifying agencies and consultants
5.3.6	Management Review Committee	- To review progress of HSE objectives and targets set in BSC. - To render suggestion and recommendations for improvements in HSE management system and HSE performance.
5.3.7	Head, HSE- Regional HQ	- To receive HSE reports from site - Coordinate, administer and control safety codes and regulations of the region - Conduct safety audits and appraise management - Associate in investigation of accidents at sites - Organise campaigns, competitions, contests and other activities which develop and maintain the interest of employees and workers in establishing and maintaining safe working condition. - To design and conduct suitable training programmes. - Liaison with INDUSTRIAL SYSTEMS GROUP HQ and with Management Review Committee on HSE issues.
5.3.8	Site In-Charge	- To ensure implementation of this HSEMSM at project site - To appoint HSE co-ordinators - To Chair site HSE review Meetings conducted not less than once a month - To define roles and responsibilities of the employees under their control with respect to HSE Management system implementation - To coordinate with MR for setting HSE objectives and targets in BSC - To formulate detailed schedule of activities for implementation of HSE programs - To implement Operational control procedures (OCPs) - To ensure compliance with all relevant statutory requirements - To arrange resources for implementation of HSE programs - To identify and arrange for provision of required training to employees as well as suppliers/ contractors - To ensure investigation into any significant incident or safety lapse

		- To ensure corrective action for non-conformities / observations - To generate HSE performance reports and forwarding the same to MR - To communicate the feedback received from interested parties to MR and vice versa - To communicate to suppliers / contractors regarding HSE issues pertaining to the activities / service provided by suppliers / contractors and to ensure their training, if required - To ensure effective implementation of Emergency preparedness response plans and periodical mock drills - To communicate the potential consequences of departure from specified operating procedures
	HSE Co-ordinator / HSE Officer at Site	- To assist and advise Site in charge in fulfilment of HSE obligations, Statutory or otherwise concerning prevention of incidents and maintenance of safe working environment. - Convene meetings and prepare record notes - Follow up on record notes - Anchoring investigation of incidents, including near miss and help in identifying and taking corrective action - Organise HSE promotional activities such as campaigns, competitions, mock drills, observing Safety Day, Environment Day and other activities in order to motivate employees and workers in establishing and maintaining safe working conditions. - To organise suitable training programmes for the preventions of incident - Co-ordinating HSE audit and ensuring closure of NCs and observations - Conducting regular HSE inspection, sharing observations with concerned execution agencies and package-in-charge and getting those closed
	Head (HR) / Site HR	- To maintain office premises with due consideration on HSE - To arrange compliance to regulation - To arrange HSE training/course in consultation with Head (HSE) / HSE Coordinator - To arrange Health Check-ups for all Employees - To encourage sites for Tree Plantation - To assist in conductance of Energy Audits and Identification of Power Saving Devices
	Head, Purchase/ Subcontracting	- To ensure Introduction of HSE requirement in contracts with agencies. - To Evaluate Performance of contract agencies. - To organize Meet and share HSE requirement with agencies.
	Head, Technical Services	- To maintain all standards and regulatory documents - To incorporate HSE requirement in documents related to commissioning procedures

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	Head, Project Management	- To ensure introduction of HSE requirements from indenting stage of Products/system - To Monitor HSE performance of subcontractor along with progress review and take appropriate Corrective Actions, if necessary - To arrange Eco-friendly Offices/stores at site
	Head, FE	- To arrange T&Ps with HSE features - To ensure that load carrying T&Ps duly certified by competent person are deployed at site and the same are retested and revalidated periodically.
	All Employees	- To adopt safe work practices at wherever they are working. - To take corrective action in case any non-conformity is observed on product / process / system with respect to Occupational Health, Safety and Environment - To report all incidents including near miss to HSE officer or HSE coordinator (Site) / HOD (SOX). - In case any particular activity / work has extremely high consequential risk or high environmental impact, the employee shall bring it to the notice of Site In charge before starting the work. - To ensure that the workers are engaged by the contractor for the job after undergoing induction training - To ensure that the persons engaged in his area follow the safety rules like using appropriate PPEs - To get involved in exercises like Job Safety Analysis and work permit system - To engage licensed electricians for site electrical works - To report any incident including near misses or safety lapses immediately to safety officer/HSE coordinator/RCM - To interfere/ stop works as & when identified unsafe. - To maintain & promote improved level of house-keeping all the time at site - To support/co-operate with audit team members as & when safety audits are carried out. - To involve in investigation of incident if any occurs in his work area - To participate in safety promotional programmes - To attend the safety committee meeting, if he is a member/ invitee - To ensure that only fit T&Ps and qualified persons are engaged.



7. RECORDS.

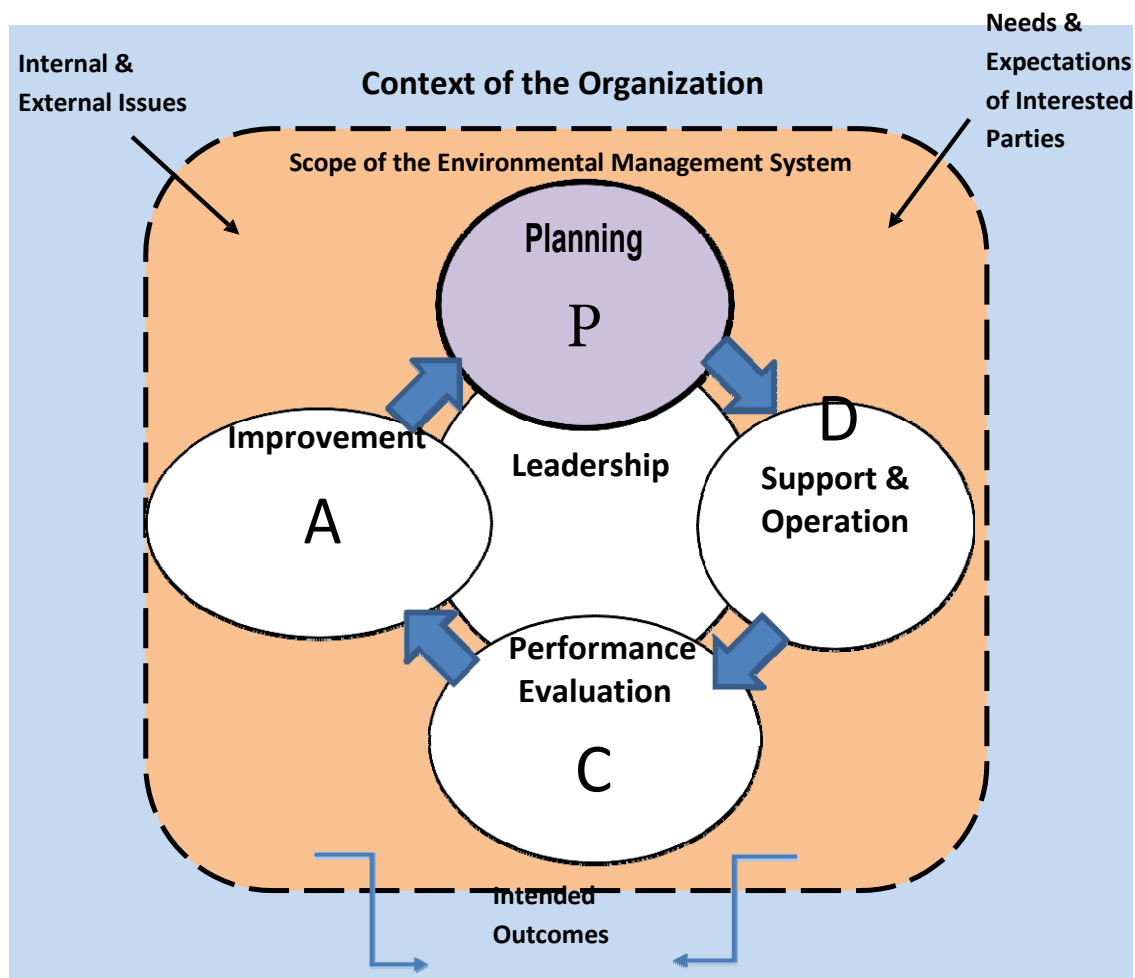
Record Title	Location	Responsibility	Retention Time
Circular for Appointment of MR(HSE)	MR(HSE)'s Office	Head(Region)	-
Organisational roles & responsibility Chart.	MR(HSE)'s Office	Head(Region) 3	Years

8. VERIFICATION AND CORRECTIVE ACTION:

HSE Task Force shall update changes in the management structure & responsibilities as and when required.

System No. HSEMSM: 6.0

PLANNING



ACTIONS TO ADDRESS RISKS AND OPPORTUNITIES**1. PURPOSE:**

To identify and address all risks and opportunities associated with BHEL context of operation, interested parties, significant OHS Hazards, Environmental Aspects and Compliance Obligations.

This is to facilitate setting of HSE objectives and targets and also to control the risk.

Keep this information up to date.

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

MR (HSE) of Regions

4. PERFORMANCE CRITERIA:

- Updated register of OHS Hazards & associated risks, and Environmental Aspects & Impacts.
- Updated register of organizational risks & opportunities
- An updated Register of applicable HSE Legislations.

5. CROSS REFERENCE.

- ISO 14001:2015, Clause: 6.1 Actions to address risks & opportunities.
- HSEP01: HSE Procedure for OHS Hazards & Risks
- HSEP02: HSE Procedure for Environmental Aspects & Impacts
- HSEP03: HSE Procedure for Register of Regulations
- Records of past correspondence of HSE legislation / regulation with interested parties especially from legislation enforcement authorities.
- Records of correspondence with legal & regulatory bodies.
- Previous records of incidents or accidents if any.
- Prevailing applicable Acts and legislation.

6. PROCEDURE:
Reference Procedures:

- ✚ HSEP01: HSE Procedure for OHS Hazards & Risks,
- ✚ HSEP02: HSE Procedure for Environmental Aspects & Impacts and
- ✚ HSEP03: HSE Procedure for Register of Regulations

Cl. No.	Activity	Responsibility
6.1.1	- The HSE related risks and opportunities related to BHEL's context & interested parties - Risks associated with OHS hazards, environmental aspects - Risks associated with compliance obligations are to be determined evaluated and actions planned to address the same.	Task Force / MR (HSE)
	The HSE related risks and opportunities associated with the context of BHEL and the needs and expectations of the interested parties shall be determined and maintained in a Register of 'BHEL HSE Risks & Opportunities'	Task Force / MR (HSE)
6.1.2	OHS Hazards & Risks: Provide awareness to employees for identification and evaluation of occupational health and safety (OHS) hazards and associated risks. Prepare procedure for identification of occupational health and safety (OHS) hazards and associated risks Environmental Aspects & Impacts: Provide awareness to employees for identification and evaluation of environmental aspects / impacts. Prepare procedure for identification and evaluation of environmental aspects / impacts.	MR (HSE) / HSE Co-ordinator
	The guidelines for development of these procedures are detailed below:	Task Force
6.1.2.1	The task force along with trained Environment/ OHS auditors / experts, shall carry out survey, consultation with a cross section of employees, contractors and collect data on occupational health and safety (OHS) hazards and risks related to all activities, product handling and services, and environmental aspects & impacts. The core team shall identify the areas of obvious physical improvement to strengthen occupational health and safety management system.	Task Force

6.1.2.2	While identifying occupational health & safety (OHS) hazards and risks during initial OHS review the, following criteria should be considered. • routine and non-routine activities; • activities of all persons having access to the workplace (including contractors and visitors); • human behaviour, capabilities and other human factors; • identified hazards originating outside the workplace capable of adversely affecting the health and safety of persons under the control of the organization within the workplace; • hazards created in the vicinity of the workplace by work-related activities under the control of the organization; • infrastructure, equipment and materials at the workplace, whether provided by the organization or others; • changes or proposed changes in the organization, its activities, or materials; • modifications to the OH&S management system, including temporary changes, and their impacts on operations, processes, and activities; • any applicable legal obligations relating to risk assessment and implementation of necessary controls • the design of work areas, processes, installations, machinery/equipment, operating procedures and work organization, including their adaptation to human capabilities.	Task Force
6.1.2.3	While identifying and evaluation of environmental aspects / impacts during initial environmental review the, following criteria should be considered: • All activities with previous records of Incidents, Accidents. • Review of the normal, abnormal (including start-up/shutdown) and emergency operations; • Review of existing environmental practices including methods of waste disposal; • Inputs from regular site & MRC meetings. • Evaluation of feedback from investigation of previous incidents/ accidents/ regulatory non-compliance; • Views/feedbacks from internal & external interested parties (like employees, suppliers, customers, Government agencies) including any complaints; • Occurrences of air pollution, water pollution, land contamination, resource loss, noise pollution; • Any other environmental concern. • Activities of all personal having access to work place (including sub-contractors & visitors). • Facilities at the work places, whether provided by the organization or others.	Task Force

6.1.2.4	FEASIBILITY ANALYSIS ON THE SIGNIFICANT IMPACTS: After identifying the significant aspects and impacts / OHS hazard and risk for any activity, product or service, further analysis shall be done as described below, by the HOD or his nominated representatives to determine whether the significant impact can be eliminated, reduced or controlled. ELIMINATION / REDUCTION: In case the significant impact/ non tolerable Risk can be eliminated or reduced, that shall be done through any of the following steps: • By a change in the technology, • By physical improvement. For any technological change or physical improvement identified, the operational feasibility or economic viability shall be studied. <i>If neither of the above two means are viable, other possible means for controlling the impact shall be examined and where possible implemented.</i> A feasibility study shall be taken up, if there is no solution readily known through any technological change or physical improvement. Once the feasibility study is done, further course of action shall be determined whether to eliminate, reduce or control the significance of the impact. CONTROL: In case the significance of the impact/ Non-tolerable risk is not possible to be eliminated or reduced, controls shall be introduced into the presently followed system to reduce the significance of the impact/ level of risk. This control can be instituted by means of training or other alternate technique(s).	MR (HSE)
6.1.3	COMPLIANCE OBLIGATIONS (LEGAL & OTHER REQUIREMENTS)	
6.1.3.1	Prepare a HSE procedure for identifying and accessing the legal and other HSE requirement applicable for the operation of ISG. The output of this activity will be the Register of Regulations.	Task Force
6.1.3.2	REVIEW & UPDATION: The Register of Regulations shall be reviewed and updated at least once in three year or whenever there is a change of any of the contents, whichever is earlier. Such updates shall be communicated	MR(HSE) / Task Force

	to the concerned departments. Notifications & Publications received from various agencies from time to time are reviewed for any changes in the applicable Legislations / Regulations. Information on any changes in the same are also obtained by interacting with PCB through letters, visits or over telephone at least once every quarter, or through information collected from relevant journals / news letters	
6.1.3.3	In case any changes to be incorporated due to changes in legal and other requirements with regard to the existing OCP's the same shall be decided and communicated to the interested party within three weeks.	MR(HSE)
6.1.4	PLANNING ACTION: Actions to be taken in order to address the risks & opportunities identified as per 6.1.1, 6.1.2 and 6.1.3 are to be documented in respective procedures. The effectiveness of these actions shall be evaluated	Task Force, MR(HSE)
	The above procedures shall be reviewed once in a three year to keep the hazards and associated risks of the organisational activities up to date.	Task Force

7. RECORDS:

Record Title	Location	Responsibility	Retention Time
1. Register of OHS Hazards and Risks	MR (HSE)'s office	MR (HSE)'s office	-
2. Register of Environmental Aspects and impacts	-	-	
3. Register of BHEL HSE Risks and Opportunities associated with context, and needs & expectations of interested parties	-	-	

8. VERIFICATION & CORRECTIVE ACTION:

MR (HSE) shall ensure the effective implementation of the above procedure and in case of deviations he shall take appropriate corrective action. The record of deviation and reasons shall be maintained. He shall also undertake periodic site visits to verify whether the register of OHS Hazards, register of environmental aspect-impact and associated risks, register of regulations and register of contextual and risks associated with interested parties are kept up to date.

HSE OBJECTIVES & PLANNING TO ACHIEVE THEM

1. PURPOSE:

To establish documented HSE objectives in the Balance Score Card considering the results of Environmental Aspects / OHS Risks Assessment at different level and functions of the organization by establishing & maintaining Environmental, Occupational Health & Safety Management Programme(s) (HSEMP).

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

MR (HSE), HODs/ Head(SOXs), Head (ISG_MSX), Head (HSE, ISGHQ)

4. PERFORMANCE CRITERIA:

- An updated Balance Score Card indicating HSE objectives and targets.
- HSE Objectives and targets at all appropriate levels in organizations structure

5. CROSS REFERENCE.

- ISO-14001: 2015 – Clause 6.2 Environmental objectives and planning to achieve them
- OHSAS – 18001: 2007, Clause – 4.3.3., Objectives and programme(s).
- Register of Regulations.
- Register of OHS Hazards & Risks.
- Register of Environmental Aspects and Impacts.
- Register of BHEL HSE Risks & Opportunities
- Health, Safety & Environment Policy.

6. PROCEDURE

Cl. No.	Activity	Responsibility
6.2.1	METHODOLOGY FOR IDENTIFICATION OF OBJECTIVES & TARGETS: The HSE objectives are the goals of the Unit established to meet the HSE policy.	MR (HSE)
6.2.1.1	CASES OF PHYSICAL IMPROVEMENT Based on HSE reviews carried out, the areas for physical improvements are identified and the objectives set.	MR(HSE)/ MRC

6.2.1.2	SETTING OF HSE OBJECTIVES AND TARGETS: The HSE objectives and targets in ISG-Balance Score Card will be set by ISG-MSX in consultation with Head, HSE-ISGHQ. The same objectives & targets will be cascaded down to Regional level and further to site level. The targets shall be specific, time bound and quantified to the extent possible. While setting the targets, HSE performance indicators shall be provided taking into account the requirement of continual improvement of HSE performance. The indicators can be used as a guide to the HSE performance evaluation system and operational system. Certain objectives and targets applicable to the whole region shall be fixed by Head(Region)	Head, HSE-ISGHQ, Head(ISG MSX), Head (Region)
6.2.1.3	REVIEW OF OBJECTIVES AND TARGETS: The monitoring and review of the objectives and targets shall be done by the MR (HSE) periodically.	MR(HSE) / HODs / Head(SOXs)
6.2.2	PLANNING ACTIONS TO ACHIEVE OBJECTIVES & TARGETS:	
6.2.2.1	On the basis of objectives and targets set, HSE Management action plan shall be prepared by HOD / Head /SOX.	HODs/ Head/SOXs
6.2.2.2	HODs/Head (SOXs) have overall responsibility of implementation of the programme and shall monitor progress of HSE Management Programme on regular basis. They shall also be sending the progress through Monthly Site HSE Report (MSHR) to MR (HSE).	HODs/ Head(SOXs)

7.0 RECORDS:

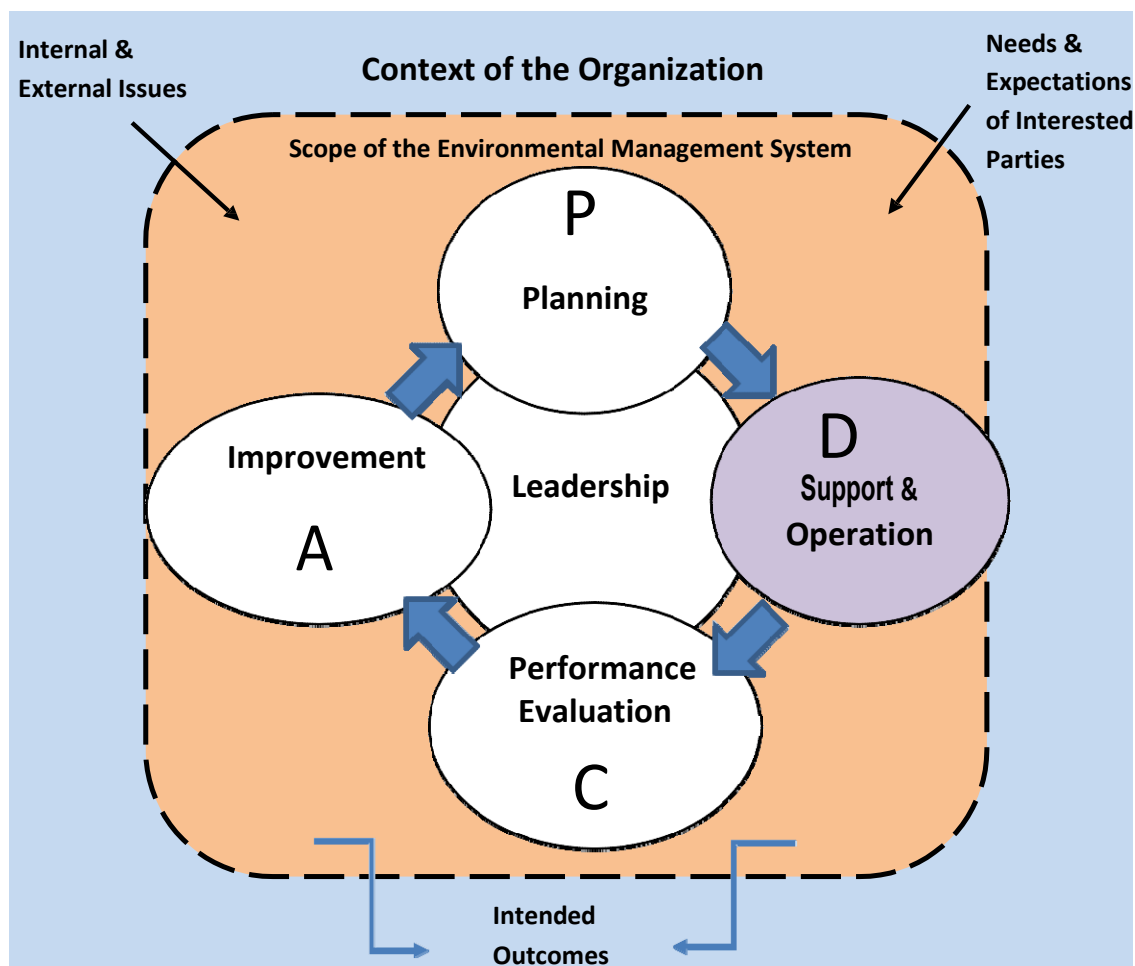
Record Title	Location	Responsibility	Retention time
Balance Score Card of different function	Function Head's Office	Function Head	
HSE related KR As in e-Map of associated employees	e-Map System	Head (ISG) & HR	

VERIFICATION & CORRECTIVE ACTION:

MR (HSE) must ensure the effective implementation of above procedure. In case of deviation, he will take appropriate corrective action. Concerned HOD shall submit a quarterly HSE Management Programme(s) progress report to MR(HSE).

System No. HSEMSM: 7.0

SUPPORT



SUPPORT: RESOURCES
1. PURPOSE:

To provide essential resources for establishing, implementing, maintaining and improving HSEMS.

2. SCOPE:

Applicable to all activities, products, services of BHEL,ISG

3. RESPONSIBILITY:

	At ISG	At ISG-HQ	At Project Sites
Provide resources	Head	Head (ISG)	Site In-charge

4. PERFORMANCE CRITERIA:

- Updated Organisation Chart.
- Define, document and communicate roles and responsibility and authority.
- Circular of appointment of MR(HSE)
- Circular of MRC committee.
- Availability of HSE Criteria in Contracts
- Availability of all HSE related resources as per contractual & legal requirements

5. CROSS REFERENCE:

- ISO-14001: 2015, Clause – 7.1, Resources
- OHSAS – 18001 (2007): Clause – 4.4.1, Resources, roles, responsibility, accountability and authority
- HSE Policy.

6. PROCEDURE:

7.1.1	Provide all resources that are required for the implementation of HSE Management System, which include. • Human • Skills • Technical • Financial • Others	Head (ISG) & Head(Region), Site In-charge
7.1.2 A	Appointment of MR(HSE)	Head(Region)
	Head shall appoint HSE Management Representative as per	

	the following "Statement of Authority": (NAME), (DESIGNATION) is appointed as Management Representative (HSE) and authorized to • Act on behalf of Head (Region) on HSE issues • Promote awareness amongst employees on HSE Management system • Review and prioritize significant environmental aspects and OHS hazards • Set objectives and targets in BSC in consultation with HOFs and get approval of Head (Region) • Facilitate formulation of HSE Management programs and get approval of Head (Region) • Evaluate HSE performance reports vis a vis objectives and targets • Generate Management information report on implementation status for management review • Organize HSE audits and ensure identification and implementation of required corrective actions. • Organise Management Review Committee Meeting to review HSE performance periodically • Co-ordinate with certifying agencies and consultants All functional/Departmental/Sectional Heads are required to comply with the provisions of the system. They have the authority and responsibility to implement the action plans to meet objectives and targets within their Function/Department /Section. Effectiveness of this system is to be ensured by awareness and participation of all employees of the Region. Head (Region)	
7.1.3	The de fined role, responsibility & au thority shall be co mmunicated through HSE Management System Manual distribution, Circulars and also by displaying at Notice Board	MR(HSE) / HODs / Head/SOXs



7. RECORDS.

Record Title	Location	Responsibility	Retention Time
Circular for Appointment of MR(HSE)	MR(HSE)'s Office	Head(Region)	-
Organisational roles & responsibility Chart.	MR(HSE)'s Office, Site In-charge Office	Head(Region) 3	Years

8. VERIFICATION & CORRECTIVE ACTION:

HSE Task Force shall update changes in the management structure & responsibilities as and when required.



System No. HSEMSM: 7.2

SUPPORT: COMPETENCE, TRAINING & AWARENESS**: COMPETENCE & TRAINING
: AWARENESS****1. PURPOSE:**

To lay down the guidelines for identification of training needs and providing appropriate training to all persons performing task for or on behalf of BHEL, Regions to ensure effective implementation of HSEMS.

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

MR (HSE) and HR.

4. PERFORMANCE CRITERIA:

Training Records & awareness levels

5. CROSS REFERENCE:

- ISO 14001: 2015, Clause – 7.2, Competence.
- ISO 14001: 2015, Clause – 7.3, Awareness.
- OHSAS 18001: 2007, Clause 4.4.2, Competence, training and awareness.
- HSE Procedure for Training & Awareness

6. PROCEDURE**Reference Procedure:**

HSEP04: HSE Procedure for Training & Awareness

Cl. No.	Activity	Responsibility
7.2.1	The HSE related training needs of all persons performing task for or on behalf of BHEL, ISGs should be identified from the Register of Environmental Aspects and Impacts & Register for OHS Hazards and Risks, statutory and regulatory requirements, in consultation with concerned employees, subcontractor, vendor etc.	MR (HSE), HODs, Head(SOXs)
7.2.2	Based on the requirement / needs the concerned persons will be	MR(HSE) /

	imparted training by in-house training programme/external training programme through preparation of training Calendar	Head/HRM
7.2.3	The HSE related training shall generally comprise of the following are • General awareness, roles & responsibilities in achieving conformance with HSE policy, objectives & targets as per HSE-MS. • Relevant HSE rules & regulations. • Significant Environmental aspects/impacts & OHS Hazards/Risk of their activities on HSE methods of reducing the related impacts and risks. • Non-conformance observed during management audits and learnings from accident/incident investigation. • HSE benefits to individuals and the society of Improved personal performance. • Consequence of not following documented HSE procedures.	
7.2.4	HSE Training calendar / Plan will be developed annually (beginning of each year) & reviewed periodically (at least once in six months) by Management Review Committee to monitor progress of implementation, & will be updated/revised as and when required. The Training calendar /Plan for each year will consist of the following types of training. a) HSE Induction Training (Mandatory to existing employees, new recruits including contractors). • HSE Policy & Objectives. • Applicable regulatory/Legislative requirements. • EH&S requirements that are conditions of employment • Significant environmental aspects/impacts and occupational hazards/risks of their work activities and the HSE benefits of improved personal performance. • Roles & Responsibilities in achieving conformance with the HSE policy, rules, procedures. HSE Management Programmes, requirements of HSE Management systems, including emergency preparedness and response requirements. • The potential consequences of deviation from specified operating procedures. b) Job Specific Training prior to starting work on a new job • Relevant rules, procedures & regulatory requirements. • Significant environmental impacts & occupational hazards/risks of their work activities & the HSE benefits of improved personal performance. • Preventive & Control Measures/Techniques. c) Training Needs identified through Environmental	MR(HSE) / Head(HR)/Head/SOX

	Impacts, OHS hazards/Risks & HOD Feedback. d) Internal HSE Management Systems Auditor Training. e) Emergency Preparedness and Response. f) Other Training needs as deemed necessary.	
7.2.5	Training Effectiveness Evaluation. Effectiveness will be determined by: 1) Improvement in HSE performance trends. 2) Qualitative assessment of the management audit findings. 3) Employee evaluations completed following selected Training sess	MR(HSE) / HODs / Head/SOXs
7.2.6	Necessary training records will be maintained for all employees.	Head/HR
7.2.7	Competence records will be maintained.	Head (HR)
7.3	It shall be ensured that all employees of INDUSTRIAL SYSTEMS GROUP are aware of: 1. HSE Policy 2. The significant OHS hazards, environmental aspects and the related actual or potential OHS risks, environmental impacts associated with their work 3. Their contribution to the effectiveness of the HSE Management System, including the benefits of enhanced HSE performance 4. The implications of not conforming with the HSE management system requirements including not fulfilling the compliance obligations	MR (HSE), HSE Coordinator, HODs (SOXs), All Employees

7. RECORDS.

Record Title	Location	Responsibility	Retention Time
Training record	HR's office	Head/HR	-

8. VERIFICATION & CORRECTIVE ACTION:

The effectiveness of the training at providing awareness, knowledge, skills or behavioural change will be evaluated by quiz programs during the training sessions, HSE audits and reduction in incidents/accidents and non-conformance.

MR (HSE) must ensure the effective implementation of a above procedure. In case of deviation, he will take appropriate corrective action. MR (HSE) shall keep a record of all such actions initiated.



System No. HSEMSM: 7.4

SUPPORT: COMMUNICATION**1. PURPOSE:**

To lay down procedures for consultation, participation and communication, both internal & external, to implement and maintain the HSEMS.

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

- Internal communication - Head of Department, HSE Co-ordinators, MR(HSE),
- External Communication - MR (HSE),

4. PERFORMANCE CRITERIA:

Record notes of Management Review Committee meeting at HQ & sites.

5. CROSS REFERENCE:

- ISO 14001: 2015, Clause – 7.4 Communication
- OHSAS 18001: 2007, Clause – 4.4.3 Communication, participation and consultation.

6. PROCEDURE

Cl. No.	Activity	Responsibility
7.4.1	INTERNAL HSE COMMUNICATION	
7.4.1.1	• Internal communication will be done through: • Display of HSE policy at prominent places and available through cards. • Training courses/workshops; • Circular on notice board; • Any other relevant HSE related information. • All employees can inform their HSE suggestions/ concerns verbally or by writing to Site/ HSE coordinator.	HODs, Head/SOXs MR(HSE)
7.4.1.2	HSE Policy will be communicated to all persons performing task for or on behalf of BHEL, ISG through training and displaying at various prominent locations.	MR(HSE)/ Head (SOXs)
7.4.1.3	Suggestions/compliments received through MRC meeting, internal HSE audit and periodic HSE inspection of site shall be verified.	MR(HSE) / HSE Co-ordinators

7.4.1.4	Findings of all HSE audits will be communicated to all HODs/ HOFs.	MR(HSE)
7.4.1.5	Action taken on the audit findings will be communicated to the MR (HSE) for follow up and records.	Concerned HOD / HOF/ Head(SOX)
7.4.1.6	Findings of the HSEMS audits & its performance with respect to set objectives will be discussed in MRC meeting. Minutes of meeting of MRC will be communicated to the relevant task force members	MR(HSE)
7.4.1.7	The changes in laws/legislation & communication received from the Legislative Authorities viz. Ministry of Environment & Forests, State Pollution Control Board, Director of Factory & Factory Inspector will be conveyed to all concerned head of functions.	MR(HSE)
7.4.1.8	MR (HSE) to communicate Audit findings and details of accidents / incidents to all sites of the region and ISG-HQ for information and taking corrective action	MR(HSE)
7.4.1.9	The sites shall respond by sending action taken report in prescribed format as per HSE Procedure for Incident Investigation, Reporting & Corrective Action	MR(HSE) / HSE Co-ordinators
7.4.1.10	New, modified and changes in activities, which involve environment aspect & impact & OHS hazards & risks will be identified & communicated to MR (HSE) by Site HSE Coordinator through their HOD. The new & modified activities shall include new machine/physical improvement/procedure/new chemical. This needs to be done prior to modification/changes in consultation with MR (HSE). MR(HSE) to submit draft changes to Head (HSE), ISGHQ, who then shall take a call on the proposal in consultation with ISG	HSE Co-ordinators
7.4.1.11	The internal interested parties are communicated regarding the environmental Aspects/ Impacts and Hazards/ Risks of activities/ products/ services through meetings/circulars/awareness training programs.	MR(HSE) / HODs / Head/SOXs
7.4.1.12	Head / HSE, ISGHQ to communicate Audit findings and accident / incident details submitted by one Region to remaining Regions which shall forward same to respective sites for corrective actions (if any).	Head / HSE, ISGHQ
7.4.2	EXTERNAL HSE COMMUNICATION	
7.4.2.1	External communication with interested parties will be done through: - Correspondence. - Interaction by concerned parties.	MR(HSE) / Head (HR) / HEAD (SOXs)

7.4.2.2	External interested parties identified are as follows. - Ministry of Environment & forests. - State Pollution Control Board. - Factory Inspectorate - Controller of explosives. - Certifying body of HSEMS - Dist. Administration - Neighbours - Other interested parties Company's HSE performance is reported through Annual Report published every year by Head (HSE), ISGHQ	
7.4.2.3	HSE Policy shall be made available to all interested parties on request at ISGHQ & Regional HQs.	Head (HSE- ISGHQ) / MR (HSE)
7.4.2.4	Decisions will be taken in MRC meetings on the basis of inputs received from HODs/Head (SOX) whether to communicate externally about any specific significant environmental aspects. The decision will be documented and communicated.	
7.4.2.5	Any suggestion/complaints received from external interested parties will be documented, reviewed & replied if found necessary after suitable action.	MR(HSE) / HODs / Head/SOXs
7.4.3	Consultation & Participation - Suggestions from all employees through corporate or other suggestion scheme, HSE Talks/Meetings shall be consulted for HSE performance and continual improvement. - The concerned employees shall be consulted in finalizing HSE policy, making of Management Programmes, hazard identification, risk assessment and Operation Control Procedures to the extent possible.	MR(HSE) / HODs / Head(SOXs)
7.4.4	Evaluation of communication / consultation & communication.	
	The effectiveness of the communication tools used to increase HSE awareness will be evaluated during the HSE management system audits, improved injury trends, fewer incidents and/or employee complaints, etc. Employee general knowledge tested during the HSEMS audits is also evidence of effective communication.	MR(HSE)

Record Title	Location	Responsibility	Retention time
Minutes of MRC meeting	RHQ & Sites	MR(HSE)	3 Years
Register of internal communication.	RHQ & Sites	MR(HSE) / HODs / Head/SOXs	3 Years
Letter of external communication.	RHQ & Sites	MR(HSE) / HODs / Head/SOXs	3 Years
HSE certifying agency	RHQ	MR(HSE)	3 Years

8 VERIFICATION & CORRECTIVE ACTION:

MR (H SE) must ensure the effective implementation of above procedure. In case of deviation, he will take appropriate corrective action. MR (HSE) shall keep a record of all such actions initiated.

SUPPORT: DOCUMENTED INFORMATION**1. PURPOSE:**

To define, establish and maintain comprehensive documented procedures and systems at all steps of operation to establish, implement, maintain and improve the performance of this Occupational Health, Safety and Environmental Management System.

To establish and ensure that all documented systems & procedures related to the requirement of ISO-14001 (2015) & OHSAS-18001 (2007) are controlled for effective implementation & maintenance of HSEMS. The changes in case required, are reviewed and approved by authorized personnel to issue as hard copy or electronic form.

To establish and maintain procedures for the identification, storage, protection, retrieval, retention and disposition of HSEMS records as well as the results of HSEMS audits and services in order to demonstrate the evidence of HSEMS.

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

Task Force.
MR (HSE)
HODs, Head (SOXs)
HSE Coordinator

4. PERFORMANCE CRITERIA:

Defined, established & maintained documented systems & procedures for effective implementation / maintenance of HSEMS

Maintained records of operation of HSE Management System

5. CROSS REFERENCE:

- ISO 14001(2015): Clause – 7.5, Documented Information.
- OHSAS – 18001 (2007): Clause 4.4.4, Documentation.
- OHSAS-18001 (2007), Clause – 4.4.5: Control of documents
- OHSAS-18001 (2007), Clause – 4.4.3: Control of records
- HSE Procedure for Document Control.
- HSE Procedure for Control of Records

6. PROCEDURE

Reference Procedures:

HSEP05: HSEP Procedure for Control of Documents

HSEP10: HSE Procedure for Control of Records

Cl. No.	Activity	Responsibility
7.5.1	BHEL ISG shall develop & document the HSE Policy, objectives and targets, which explains briefly the company's HSE philosophy, vision, goals, commitment to continual improvement, & prevention of pollution, compliance with national laws, policies & proactive expectations.	Task Force.
	The documented HSE Management systems has been designed & structured in four levels as outlined below.	Task Force.
7.5.1.1	LEVEL 1: HSE Management Systems Manual. The HSE: M SM explains the various system elements & their interaction with other relevant elements & provide direction to related documentation. The manual covers all the system clause requirements of ISO 14 001: 2015. Environmental Management Systems-Requirements with guidance for use and OHSAS 18001:2007 Occupational Health & Safety Management Systems - Requirement.	
7.5.1.2.	LEVEL 2: HSE Operational Manual. The HSE operation Manual, which is a set of documents, covers the following: 1. HSE Procedures, - HSE Procedure for Register of OHS Hazards and Risks (HSEP:01) - HSE Procedure for Register of Environmental Aspects and Impacts (HSEP:02) - HSE Procedure for Register of Regulations (HSEP:03) - HSE Procedure for Training and Awareness (HSEP:04) - HSE Procedure for Control of Documents (HSEP:05) - HSE Procedure for Emergency Preparedness and Response Plan (HSEP:06) - HSE Procedure for HSE Performance measurement, Monitoring and Review (HSEP:07) - HSE Procedure for Incident investigation, Reporting and Corrective Action (HSEP:08) - HSE Procedure for Nonconformity handling and Corrective Action (HSEP:09) - HSE Procedure for Control of Records (HSEP:10) - HSE Procedure for Internal HSE Audit (HSEP:11) - HSE Procedure for Permit to Work (HSEP:12) - HSE Procedure for Operational Control (HSEP:15)	

	2. HSE Plan for Site Operations (HSEP:13) 3. HSE Operational Control Procedures (OCP) for those operations & activities that are associated with the identified significant environmental aspects/impacts & non-tolerable OHS hazards/risks.	
7.5.1.3	LEVEL 3: HSE Formats. The various Formats, which are identified in HSEOM in 7.5.1.2 above	
7.5.1.4	LEVEL 4: HSE Records. All the records as referenced in all the procedures, which constitute the basis of this documented HSE Management Systems, and provide the objective evidence of system implementation and adoption. HSE records shall be legible, identifiable & traceable to the activity, product or services involved. HSE records shall be stored & maintained.	
7.5.2	When creating & updating documented information, following shall be ensured: • Identification & description (eg. A title, date, author, or reference number) • Format (eg. Language, software version, graphics) and media (eg. Paper, electronic) • Review and approval for suitability & adequacy	
7.5.3	CONTROL OF DOCUMENTED INFORMATION	
7.5.3.1	Release of a set of document: The documents are controlled & approved as per HSE procedure for document control by ensuring that: • All controlled copies of documents have "Table of contents" indicating latest revision of chapters/ documents in that manual & signature in original of approving authority so that documents are easily identifiable. • All such manuals & procedures have "Controlled Copy" stamp on them.	Head (HSE- ISGHQ) / MR(HSE) / HSE Co-ordinator
7.5.3.2	To avoid any unintended usage. 1. No document is considered valid without an index Carrying original signature of approving authority and of first page of document having "Controlled Copy" stamped. 2. All document/chapter also indicate Rev. No., Page – of – and a unique document number to identify any intermediate page. 3. The document is valid, if Rev. No. as indicated in authorized "Table of Contents"/first page of document stamped, "Controlled Copy" matches the attached documents Revision	HSE Co-ordinator

	Number so that changes and current revision status of documents are identified. 4. Copy issued to concerned approving authority is considered as master copy. 5. All documents of external origin required for planning and operation purpose are entered in the receipt control register. These documents, if required to be distributed shall be entered in the issue control register.	
7.5.3.3	Issue Control.	
	HSE documents shall be issued as per the distribution list given by MR (HSE) and issue control shall follow the HSE procedure on document control.	Doc. Control Nominee
	HSE Documents are available in the WEB (Intranet) as a controlled document and can be referred online. Once printout is taken it will be treated as uncontrolled document. HSE Formats can be downloaded for generation of records	Doc. Control Nominee
7.5.4	CONTROL OF RECORDS	
7.5.4.1	All HSEMS records including pertinent contractors / supplier's information records, and other records as mentioned in various procedures of this manual shall be prepared legibly and maintained at designated locations.	HODs / Head/SOXs
7.5.4.2	Records are identified as per HSE procedure for control of records.	HODs / Head/SOXs
7.5.4.3	Record Retention, access, storage and Maintenance will be as per HSE procedure for control of records.	
7.5.4.4	Sub-Contractor records, when required, shall be maintained as per HSE procedures for control of records.	
7.5.4.5	Disposal of HSEMS records.	
	The records are disposed of by any one of the following means: - After the retention period if not required by the customer/department, the concerned personnel responsible for the records, destroys the records. - When records need to be preserved more than the retention period, the concerned personnel stores with himself or in the identified location.	HSE Co-ordinators

	BACK UP	
	Back up of all documents is maintained electronically.	

7 DO CUMENTS / RECORDS:

Doc. T itle	Location	Responsibility	Retention Time
HSEMSM	On HSE Web Portal	Head (HSE-ISGHQ)	-
HSEOM	On HSE Web Portal	Head (HSE-ISGHQ)	-
Master List of HSEMS Records	HODs office	HODs	-
HSE Records as per HSEMS	Project Site	HODs / Head (SOXs) / HSE Coordinator	

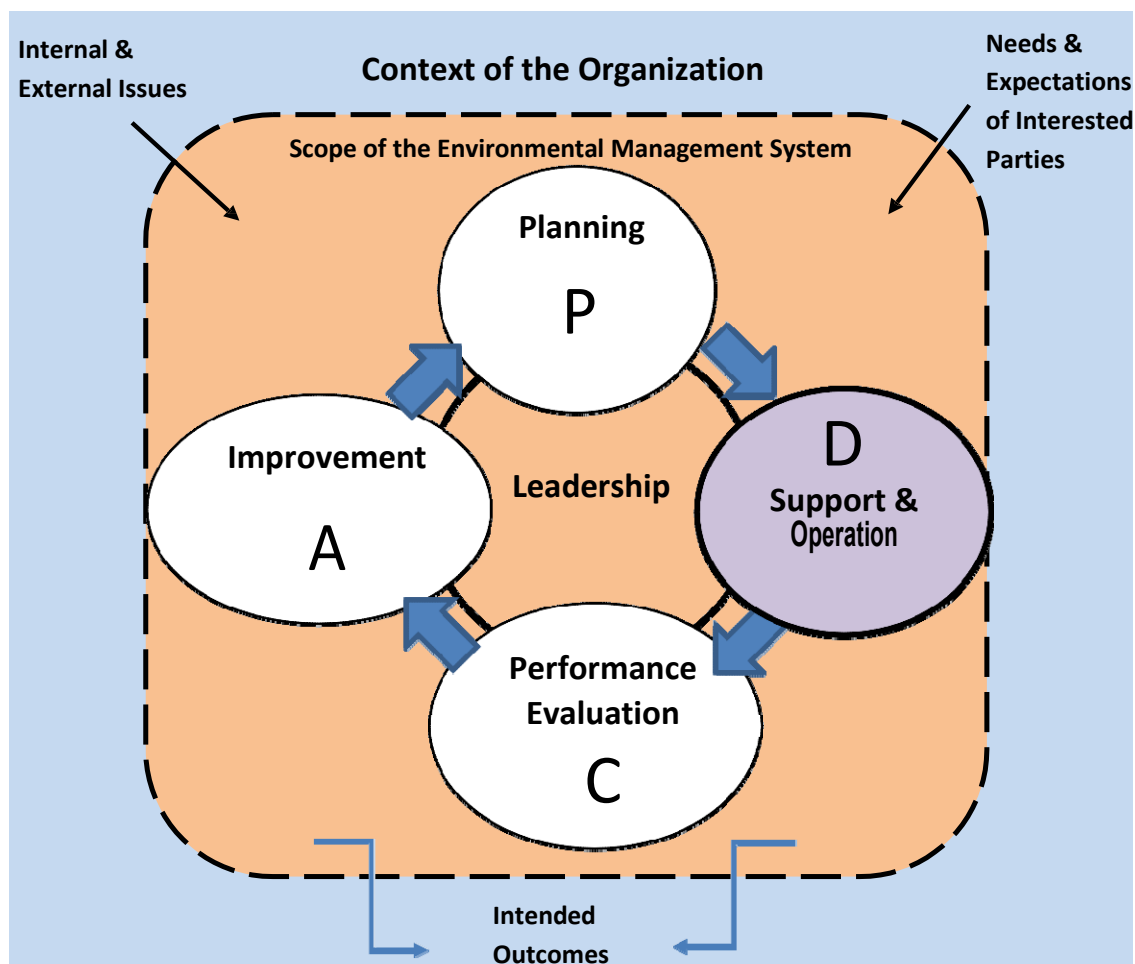
8 VE RIFICATION & CORRECTIVE ACTION:

MR (HSE) must ensure the effective implementation of above procedure. In case of deviation, he will take appropriate corrective action. MR (HSE) shall keep a record of all such actions initiated.

DOCUMENT NAME	ISSUING AUTHORITY	APPROVING AUTHORITY
HSE Policy	Head (HSE-ISGHQ)	Head (ISG)
HSEMSM Level-1	Head (HSE-ISGHQ), MR (HSE)	Head (ISG)
HSEOM Level – 2	Head (HSE-ISGHQ), MR (HSE)	Head (HSE-ISGHQ)
HSE Formats Level-3	Head (HSE-ISGHQ), MR (HSE)	Head (HSE-ISGHQ)
HSE Records Level –4	MR (HSE) / HODs, Head/SOXs	-

System No. HSEMSM: 8.0

OPERATION



OPERATION: OPERATIONAL PLANNING AND CONTROL
1. PURPOSE:

To establish & control documented procedures to ensure that organization's identified significant OHS hazards & associated risks and environmental aspect & impacts are controlled in line with HSE policy including HSE communication to suppliers / contractors and integration of HSE requirements at planning stage.

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

All Function Heads
All Employees
Task Force
MR(HSE)

4. PERFORMANCE CRITERIA:

HSE Records as per requirements of various systems and procedures of this HSEMSM

5. CROSS REFERENCE:

- ISO 14001: 2015, Clause – 8.1, Operational Planning & Control.
- OHSAS 18001:2007, Clause – 4.4.6, Operational Control.
- HSE Policy.
- Register of Environmental aspects and impacts.
- Register of OHS hazards and risks.
- Register of Regulations.
- Register of BHEL HSE Risks & Opportunities
- HSE Procedure for Operational Control

6. PROCEDURE
Reference Procedures:

HSEP15: HSE Procedure for Operational Control
Operational Control Procedures

Cl. No.	Activity	Responsibility
8.1.1	Identify those activities, products, operation & services that are having environmental aspect & impact & OHS hazards & risks, assessed & evaluated to identify significant aspects/impacts & OHS hazards/risks where operational control is required to be established	MR (HSE)/Head (SOXs)

	and implemented.	
8.1.2	Documented operational control procedure shall be prepared to cover the activities, operations & services Where their absence could lead to deviation from HSE Policy.	Task Force
8.1.3	Auditable performance criteria shall be specified in every OCP.	Task Force
8.1.4	Operational Control Procedures shall be made available at the place of work in printed form.	HODs / Head/SOXs
8.1.5	The relevant OCPs / legal & other regulatory requirements shall be communicated to the suppliers & contractors to enable them control of identified aspect & impacts & OHS Hazards & risks.	HODs/ Head/SOXs
8.1.7	Critical equipment, machinery, plant, processes & other sources from the point of pollutant release in water or air & OHS risks shall be maintained as per laid down procedures in order to reduce / control or prevent environmental impacts & OHS risks.	HODs / Head/SOXs
8.1.8	Machine & equipment shall be operated, monitored as per the OCP & laid down criteria and records shall be maintained.	HODs / Head/SOXs
8.1.9	Control shall be exercised on the entry and movement of person of contractors and other visitors to the workplace.	HODs/ Head (SOXs)

7. RECORDS:

Record Title	Location	Responsibility	Retention Time
Operational Control Procedures	Reference OCPs: HSE Web Portal OCPs: Project Sites	Head (HSE), ISGHQ HODs, Head (SOXs), HSE Coordinators	
Records of HSE	MR(HSE)'s Office & Head (SOXs)'s office	MR(HSE) & Head (SOXs)	

8. VERIFICATION & CORRECTIVE ACTION:

MR (HSE) shall verify that the necessary records are generated to ensure the effective implementation of HSEMS procedures. In case of deviation, he will take appropriate corrective action. MR (HSE) shall keep a record of all such actions initiated.

**OPERATION: EMERGENCY PREPAREDNESS AND RESPONSE****1. PURPOSE:**

To establish, implement and maintain procedures to identify potential foreseeable accidents/emergency situations in order to prevent, control and mitigate environment impacts, OHS risks and to test / review / revise such procedures periodically.

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

HSE Coordinator
All Function Heads
All Employees
MR(HSE)

4. PERFORMANCE CRITERIA:

- Updated emergency preparedness and response plan.
- Incident/Accident record.
- Record of mock drills.

5. CROSS REFERENCE:

- ISO 14001: 2015, Clause – 8.2, Emergency preparedness and response.
- OHSAS 18001: 2007, Clause – 4.4.7, Emergency preparedness and response.
- Register of Environmental Aspect and Impacts.
- Register of OHS Hazards and Risks.
- Register of Organizational Risks & Opportunities
- HSE Policy
- HSE Procedure for Emergency Preparedness and Response.

6. PROCEDURE:**Reference Procedures:**

HSEP06: HSE Procedure for Emergency Preparedness & Response

Cl. No.	Activity	Responsibility
8.2.1	Identify potential emergency situation & areas during Identification of Environmental aspect & associated Impacts and OHS Hazards and associated risks.	HSE Task Force

8.2.2	The emergency preparedness and response of ISG shall be as per The Emergency Preparedness and Response plan.	MR (HSE)/ Head (SOXs)
8.2.3	Corrective action :	
	Analyse the causes of occurrence of the emergency and prepare a report specifying preventive measures to be taken for non-recurrence of the incident/accident if any and maintain record.	MR (HSE)/ Head (HOXs)
	Document corrective actions arising out of these incidents.	MR (HSE)
	Inform regulatory authorities about the reportable incident/ accident as per applicable legislation.	Head/SOX / MR(HSE)/ HSE Coordinator
8.2.4	Review/Revision of Emergency Preparedness and Response Plan shall be at least once in two years. Reasons for amendments shall be mentioned.	Task Force

7. RECORDS:

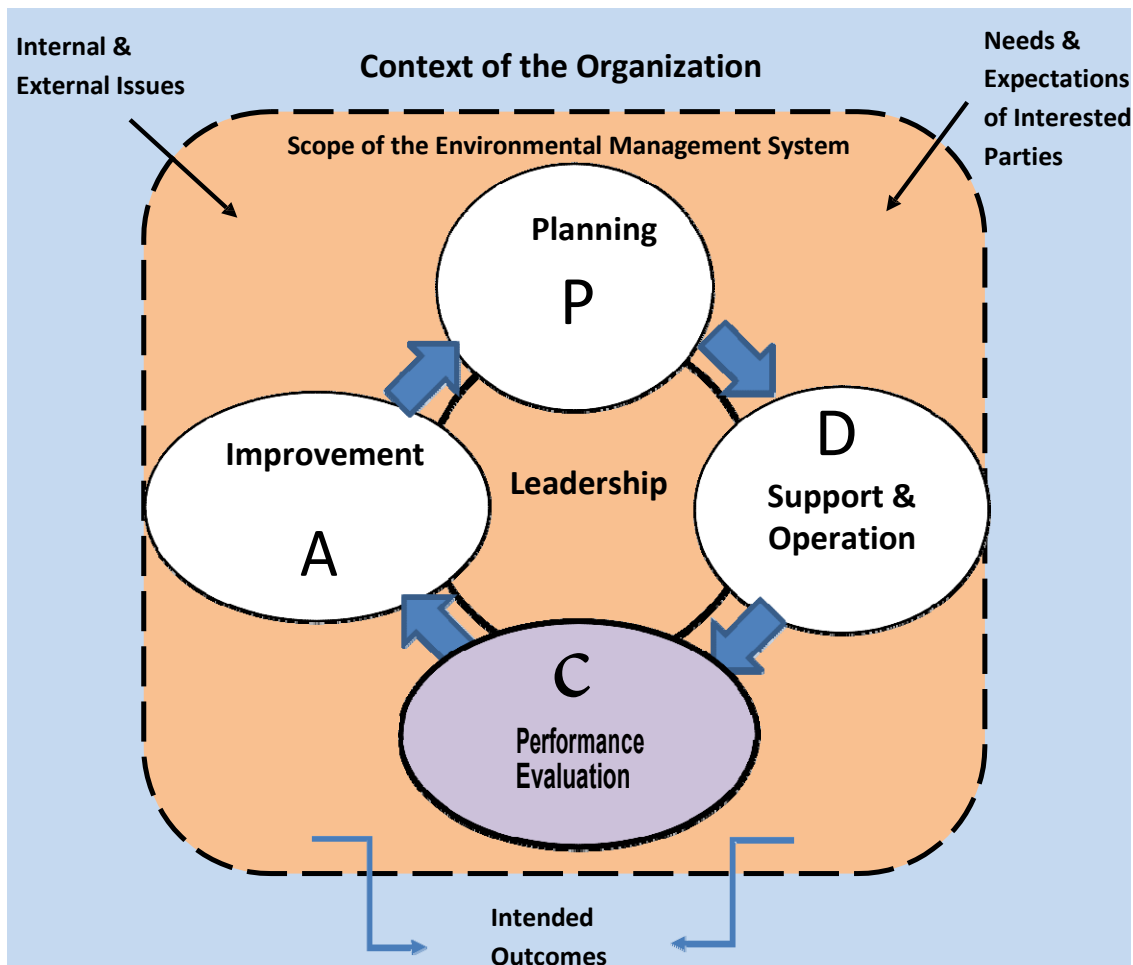
Record Title	Location	Responsibility	Retention time
Incident/Accident Record	MR(HSE)'s office	MR(HSE)	3 years
Record of Mock Drills	Head(SOXs)'s office	Head(SOXs)'s office	3 years

8. VERIFICATION & CORRECTIVE ACTION:

MR (HSE) shall ensure effective implementation of this procedure, and in case of any deviation, he shall take appropriate corrective action.

System No. HSEMSM: 9.0

PERFORMANCE EVALUATION





PERFORMANCE EVALUATION: MONITORING, MEASUREMENT, ANALYSIS AND EVALUATION

1. PURPOSE:

To establish, implement and maintain documented procedures to:

- To measure and monitor HSE performance of BHEL, ISG activities on annual basis and identify opportunities for improvement.
- To ensure calibration of sensitive monitoring equipment and maintain records in order to ensure functioning of the system.
- To establish, implement and maintain documented procedures to periodically ensure, evaluate compliance with respect to applicable HSE regulation, legal requirement and other requirements:

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

MR (HSE), Head (HR), Head(SOXs),

4. PERFORMANCE CRITERIA:

- Monitoring and measurement record as per HSEMSM and HSEOM.
- Calibration records.
- Record notes of MRC meeting.
- External and internal Audit reports.
- Incident Reports and Corrective Actions.

5. CROSS REFERENCE:

- ISO-14001: 2015, Clause – 9.1, Monitoring measurement, analysis and evaluation.
- OHSAS 18001: 2007, Clause – 4.5.1, Performance measurement and Monitoring
- HSE Procedure for HSE Performance measurement, monitoring & review
- Register of Regulations.

6. PROCEDURE.

Reference Procedure:

HSEP07: HSE Procedure for (HSE) Performance Measurement, Monitoring & Review

Cl. No.	Activity	Responsibility
9.1.1	Continual & periodic monitoring of HSEMS is carried out by :	
	Establishing auditable performance indicators in the respective department as per HSEMS.	MR(HSE) / HODs / Head/SOXs
9.1.1.1	HSE Management Programmes are monitored through BSC as well through HSE Management Review Committee Meeting.	HODs, Head (SOXs)
9.1.1.2	The weakness in implementation of HSEMS is identified and rectified by periodic internal HSEMS Audits.	MR(HSE)/ Head/SOXs/ HODs/ HSE Coordinators
9.1.1.3	HSEMS management review is done by ISG MRC	MRC
9.1.1.4	Measurement and monitoring of Key characteristics / process parameters of process that can have significant environmental impacts and other activities as per user's manual.	Head (SOXs)
9.1.1.5	To identify the equipment for internal and external calibration/verification of monitoring and measuring equipment and establishing calibration procedure and retain associated records.	HOD(TSX) / Head/SOX
9.1.1.6	To identify the T & P s for internal and external fitness testing and to establish fitness testing procedures and maintaining records.	Head(FEX), Head (SOXs)
9.1.1.7	Periodic monitoring of inspection of PPEs as per documented procedures.	Head (SOXs)
9.1.1.8	Results of company's HSEMS shall be measured, monitored & compared on an annual basis considering established HSEMS performance data.	Head (HSE- ISGHQ) / MR(HSE)
9.1.2	EVALUATION OF COMPLIANCE	
9.1.2.1	To establish implement and maintain periodic assessment of compliance of legal and other requirements through internal and external audits.	MR (HSE)
9.2.1.2	To prepare and maintain records of periodic evaluation of above compliance	MR (HSE)

7. RECORDS.

Record Title	Location	Responsibility	Retention time
T & Ps fitness reports	HQ / Sites	HOD (FEX),Head(SOX)	2 Year
Calibration reports	HQ / Sites	HOD/TSX Head/SOXs	2 Year
HSE Audit reports	HQ / Sites	MR(HSE) Head/SOXs	3 Years
HSE inspection reports	Sites	Head/SOXs	3 Years
HSEMS performance data	HQ	MR(HSE)	3 Years
Health check-up record.	HQ	Head(HRM)	3 Years
Minutes of MRC Meeting	HQ / Sites	MR(HSE)	3 Years
Records of review of compliance with legal and other requirements through internal and external audits.	MR (HSE)'s office	MR (HSE)	3 Years

8. VERIFICATION & CORRECTIVE ACTION:

MR (HSE) shall ensure effective implementation of this procedure and in case of any deviation, he shall take appropriate, corrective action.



System No. HSEMSM: 9.2

PERFORMANCE EVALUATION: INTERNAL AUDIT**1. PURPOSE:**

To establish and maintain an internal audit procedure for periodic HSEMS audits which are planned and implemented to determine effective implementation of HSEMS.

2. SCOPE:

Applicable to all activities, products, services of BHEL, ISG

3. RESPONSIBILITY:

The overall responsibility for internal HSEMS audit lies with MR (HSE).

4. PERFORMANCE CRITERIA:

Internal HSEMS audit reports.

5. CROSS REFERENCE:

- ISO 14001:2015, Clause 9.2, Internal audit.
- ISO 19011:2011, Guidelines for auditing management systems
- OHSAS 18001:2007, Clause 4.5.5, Internal Audit.
- Register of Regulations.
- Register of HSE Aspect and Impacts.
- Register of OHS Hazards and Risks.
- HSE policy.
- Previous HSE Audit Finding.
- HSE procedure for internal audit.

6. PROCEDURE:**Reference Procedure:**

HSEP11: HSE Procedure for Internal Audit

Cl. No.	Activity	Responsibility
9.2.1	Internal HSE Audit Planning.	
9.2.1.1	"Internal HSE Audit Calendar" is prepared for the year to include periodic auditing of all functional areas having significant Environmental Aspects & OHS Risks.	MR(HSE)
9.2.1.2	The audit plan shall be made such a way that all areas are covered once in a year & also considering importance of activity concerned/environmental aspects and results of previous audits.	MR(HSE)

9.2.1.3	The audit plan is reviewed and updated if required. The conductance of internal HSEMS audit shall be as per HSE procedure for internal HSEMS audit	Head(HSE)/ MR(HSE)
9.2.2	Follow up of corrective actions.	
9.2.2.1	Timely corrective actions are taken as agreed and is recorded on the "HSE Nonconformity Report"	HSE Auditees
9.2.2.2	Implementation of the corrective action is followed up with the auditee and the same is reviewed for effective implementation based on HSE NCR	MR (HSE)/ HSE Auditors / HODs / Head/SOXs
9.2.2.3	The final closure of the HSE Nonconformity Report is verified for the effective implementation of the action taken and disposition of non-conformity (if any).	HSE Auditors / HODs / Head/SOXs
9.2.3	Audit review.	
9.2.3.1	Analysis of audit regarding timely completion of pending corrective actions and "Analysis of Internal HSEMS Audit, ISO-14001 & OHSAS-18001 v/s department" is submitted by MR (HSE) during management review.	MR(HSE)
9.2.3.2	Support for closing NCR or implementation of Corrective Actions is given as required.	MRC/ MR(HSE)
9.2.3.3	Effectiveness and implementation of Corrective Actions shall be monitored periodically.	R(HSE)

7. RECORDS:

Record Title	Location	Responsibility	Retention time
Internal Audit Calendar	RHQ	MR(HSE)	3 Years
Internal HSE Audit Report.	RHQ / Sites	MR(HSE) / HODs / Head(SOX)	3 Years
HSE Nonconformity Report	RHQ / Sites	MR(HSE) / HODs / Head(SOX)	3 Years

8. VERIFICATION & CORRECTIVE ACTION:

MR (HSE) shall ensure effective implementation of this procedure, and in case of any deviation, he shall take appropriate corrective action.

PERFORMANCE EVALUATION: MANAGEMENT REVIEW
1. PURPOSE:

To establish and maintain procedures for periodic review of HSEMS by top management of HSEMS to ensure its suitability, adequacy and effectiveness.

2. SCOPE:

Applicable to all management reviews of the HSEMS established and maintained at BHEL, ISG.

3. RESPONSIBILITY:

MR (HSE)

4. PERFORMANCE CRITERIA:

Minutes of Management Review Committee (MRC) meeting.

5. CROSS REFERENCE:

- ISO 14001:2015, Clause 9.3, Management review
- OHSAS 18001:2007, Clause 4.6, Management review.
- HSEOM
- Internal & External HSE Communications
- Internal HSE Audit Reports and HSE Nonconformity Reports.
- Non-conformance and corrective and preventive action.
- BSC on HSEMS
- HSE Policy.

6. PROCEDURE:

Cl. No.	Activity	Responsibility
9.3.1	Planning for management review.	
9.3.1.1	HSE (Management review) meeting shall be conducted at least twice in a year (preferably at an interval of about six months).	MR(HSE)
9.3.1.2	An agenda is prepared by MR (HSE), issued to all the members of MRC.	MR(HSE)

9.3.1.3	Agenda for the management review shall cover topics such as: - Follow up actions from previous management reviews. - Summary of NCs & CAPA of internal audits (internal & external). - Compliance on applicable legal and other requirement. - Result of participation and consultation through corporate and other suggestion scheme. - Communication from external parties including complaints. - HSEMS performance with respect to BSC on HSE and its review. - Incident investigation & CAPA. - Changing circumstances in the business if any. - Recommendations for improvement.	MR(HSE)
9.3.1.4	Record notes on management review committee meeting shall be prepared reflecting the decision and recommended actions given by MRC related to possible changes to; - HSE performance. - HSE policy and objectives. - Resource required. - Other elements of HSE Management System.	MR (HSE)
9.3.1.5	The above Report shall be communicated to Head (HSE-ISGHQ), all HODs, HOFs & Head (SOXs) for necessary implementation.	MR(HSE)

7. RECORDS:

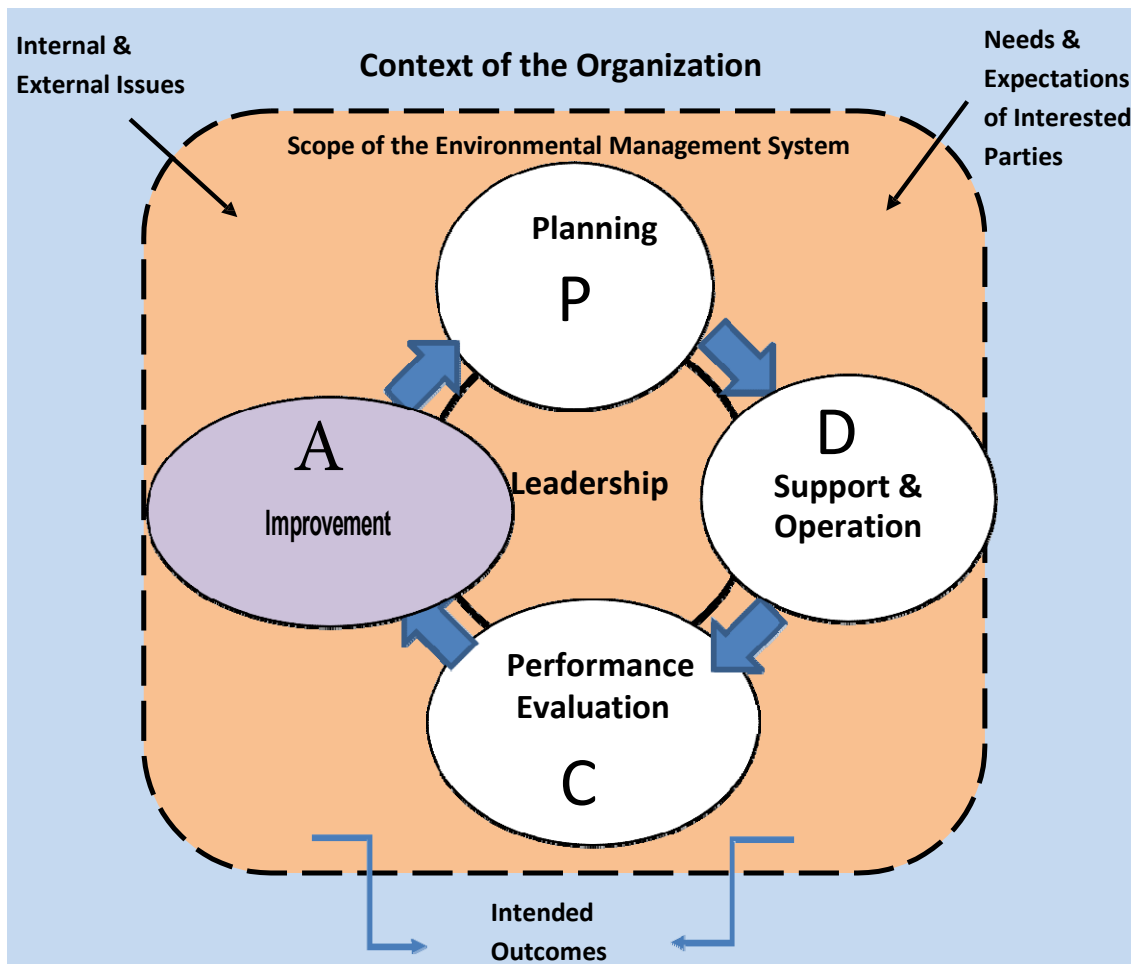
Record Title	Location	Responsibility	Retention time
Record notes on MRC	MR(HSE)'s office	MR(HSE)	3 years
MRC Agenda	MR(HSE)'s office	MR(HSE)	3 years

8. VERIFICATION, CORRECTIVE AND PREVENTIVE ACTION:

MR (HSE) shall ensure effective implementation of this procedure, and in case of any deviation, he shall take appropriate

System No. HSEMSM: 10

IMPROVEMENT





IMPROVEMENT: NON CONFORMITY HANDLING & CORRECTIVE ACTION

1. PURPOSE:

To establish, implement and maintain documented procedures to record, investigable and analyse the incidents and non-conformances with the HSEMS.

To ensure Corrective Actions in order to prevent recurrence

2. SCOPE:

Applicable to all HSEMS related activities, products, services, conditions & facilities of BHEL, ISG

3. RESPONSIBILITY:

MR (HSE), Head (SOXs).

4. PERFORMANCE CRITERIA:

Incident Reports, Root Cause Analyses and Corrective Actions.

5. CROSS REFERENCE:

- ISO 14001:2015, Clause – 10.2: Non-conformity and corrective action.
- OHSAS 1800 1:2007, Clause 4.5.3, Incident investigation, non-conformity, corrective action and preventive action.
- HSE Policy.
- HSE procedures on incident investigation and reporting.
- HSE Procedure for Non-conformity, Corrective & Preventive Actions

6. PROCEDURE:

Reference Procedures:

HSEP08: HSE Procedure for Incident Investigation, Reporting & Corrective Action

HSEP09: HSE Procedure for Non-Conformity Handling & Corrective Actions

Cl. No.	Activity	Responsibility
10.1	Non-conformance which may affect the HSE performance shall be identified as per HSE procedure on incident investigation and reporting carrying out	HSE Co-ordinators / HODs / Head/SOXs / MR(HSE)

10.2	Time bound corrective & preventive actions based on the investigations shall be initiated to mitigate the risks. Preventive action shall be taken to avoid reoccurrence.	/ HODs / Head/SOXs / MR(HSE)
10.3	Where non-conformities relating to HSEMS are identified within the company or by Regulatory bodies, the causes of non-conformities shall be investigated by systematic analysis. Above non-conformities shall be investigated to identify root cause.	HSE Task Force
10.4	Any corrective or preventive action taken to eliminate the causes of actual & potential non-conformance shall be appropriate to the magnitude of the problem and commensurate with the environment impact encountered.	HSE Coordinators / HODs / Head/SOXs / MR(HSE)
10.5	Role & responsibility/authority for incidents, non-Conformance, corrective and preventive action is as follows:	
10.6	R O L E	
10.6.1	Identification of incidents (including near misses and accidents, if any shall be recorded as per format included in the HSE procedure for incident investigation and reporting and reported to concerned persons. Fatal and major accidents as defined in the relevant law shall be reported to the statutory agencies within the stipulated time in the prescribed format.	Head(SOXs)/ Head (HRM)
10.6.2	Taking action to mitigate any consequence arising from Incident/non-conformance.	HODs/ Head(SOX)
10.6.3	Investigating the cause & initiating corrective & preventive actions & monitoring the results of action taken.	Head (SOXs) / HODS
10.6.4	Maintaining incident / accidents records & conduct annual analysis and communicate	MR (HSE)
10.7	Identification of non-conformance with respect to: - HSEMSM - HSEOM - Gaps in implementation of non-conformance reports & follow up of Management Review Meeting minutes. - Identifying, initiating & completing corrective and preventive action. - Conformation of the effectiveness of corrective & preventive action. - Adequacy assessment of corrective & preventive action.	HSE Co-ordinators / HSE Auditors / HODs /Head (SOXs)
10.8	Above identification and non-conformities and it's corrective and preventive actions shall be dealt with as HSE procedure for non-conformity and	

	corrective & preventive action.	
10.9	Necessary changes required in the HSEMS arising from corrective and preventive actions are to be made in the HSEMS documentation.	HSE Task Force

7. RECORDS:

Record Title	Location	Responsibility	Retention time
Incident Reports	RHQ & Sites	MR(HSE)/ Head/SOXs	3 years
Non Conformity Report	RHQ & Sites	MR(HSE)/ Head/SOXs	3 years
RCA reports on HSE	RHQ & Sites	MR(HSE)/ Head/SOXs	3 years
Reports on Corrective Actions implementation	RHQ & Sites	MR(HSE)/ Head/SOXs	3 years

8. VERIFICATION, CORRECTIVE AND PREVENTIVE ACTION:

MR (HSE) shall ensure effective implementation of this procedure, and in case of any deviation, he shall take appropriate, corrective and preventive action.