

# **Safety Management Plan and Regulatory Provisions**

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# Health and Safety Management Systems

*This system differs from the existing ones by a necessity of the entire staff being involved in realizing health and safety improvement programmes with responsibility sharing.*

**Health and safety management systems include well documented modules of safety management method in the form of action procedures at all levels of management and decision making.**

# Elements of Safety Management System

- **Health & Safety Policy of the company and the mine**
- **Roles and Responsibilities of all levels in the organization**
- **Specified competencies of staff**
- **Safety Committee, formation and role**
- **Method to identify and control high risk**
- **Forward Program to ensure actions to control hazards are carried out**
- **Emergency Preparedness to cope with a hazard if it should occur**
- **Monitoring processes for all identified hazards with or without residual risks**
- **Identification of trigger points and resultant actions if these are reached**
- **Safety clearance for new equipment, for work methods and materials used**
- **Accident Statistics collection, analysis & actions**
- **Reporting and record keeping Requirements**
- **Auditing and review processes**

# Structure of Safety Management System

## ***Strategic Level***

(i) Health & Safety policy (ii) Safety Management – Roles and Responsibilities (iii) Health and Safety committee (iv) Overall Safety Management System and Plans

## ***Management Level***

(i) Hazard Identification & Risk Management: It contains 'Definitions' and Risk Assessment Processes which include:

*Formation of Team; Hazard Identification; Risk Ranking – Assessment thereof; Treatment Controls and Action Plans; Training and Continuous improvement; Inquest into Accidents and Reporting; Auditing and review*

(ii) Safety Management Plans (iii) Safety Manual

## ***Operational Level***

Safe Operating Procedures (SOP's)

## **Developing SMP - Proposed changes in mining legislation (Mines Act)**

**In order to ensure that the ‘owner’ under the Mines Act is someone in charge of decision making in the corporate hierarchy, the proposed definition of “Owner” means every person or authority having ultimate control over the affairs of the mine and specifies such person (viz; Chief Executive Officer or Managing Director) or authority under all possible circumstances in the present scenario.**

## **Developing SMP - Proposed changes in mining legislation (Mines Act)**

**In order to prevent evasion of responsibility and any confusion regarding management hierarchy, it is proposed that the term 'Agent' means every person being superior to the Manager. This is done to ensure the superiority of the agent since he takes part in the management, control, supervision or direction of the mine on behalf of the owner.**

## **Developing SMP - Proposed changes in mining legislation (Mines Act)**

**The proposed new section requires owner of every mine to appoint sufficient number of qualified & competent persons for supervision to ensure safety. This requirement would be mandatory on the part of the owner to ensure adequate & effective supervision through appointment of sufficient competent and qualified supervisors.**

## **Developing SMP - Proposed changes in mining legislation (CMR & MMR)**

- **Duties and responsibilities of owner of a mine has been included;**
- **General responsibilities of suppliers, manufacturers and designers of machinery, equipment or substances have been added;**
- **Responsibilities of contractors engaged in a mine have been detailed;**
- **An important provision has been added in the Duties of persons employed in mines in consonance with duty of care;**

## **Developing SMP - Proposed changes in mining legislation (CMR & MMR)**

- **A provision for preparation and development of Safety Management Plan has been inserted;**
- **The owner, agent and manager of every mine need to periodically review the hazards identified and risks assessed, to determine whether further elimination, control and minimization of risk is possible and consult with the safety committee on the review;**

## **Developing SMP - Proposed changes in mining legislation (CMR & MMR)**

- **The owner, agent or manager of every mine need to submit a copy of the ‘Safety Management Plan’ to the concerned officials of DGMS, who may suggest modifications in the plan for incorporation of the same; and**
- **The owner, agent and manager of every mine need to ensure effective implementation of the ‘Safety Management Plan’.**

# **Development of Safety Management Plan (SMP)**

**Under the stewardship of owner development of site specific SMP's is a pathway for creating, maintaining and ensuring healthy and safe workplace by continually striving for zero harm to miners and people incidental to mining operations. This is aimed at loss control, and integral part of overall business plan of the organization.**

# Development of Safety Management Plan (SMP)

- *Mine Safety and Health Policy (MSHP)*

**MSHP is an instrument attuned with national OSH policy and in consonance with the aspirations of ILO Safety and Health in Mines Convention, 1995 (No.176).**

# Development of Safety Management Plan (SMP)

- *Tripartite and bipartite dialogue on OSH issues*

**From the organizational perspective, tripartite and bipartite discussions at strategic, managerial and operational level can be effective tool for conflict resolution and promote harmonious way to develop opportunities for workers to obtain productive work in conditions of freedom, equity, security and human dignity.**

# **Development of Safety Management Plan (SMP)**

**The role of safety committee is important vis-à-vis development of SMP at management and operational level. It mandates an opportunity of Manager-supervisor-worker debate on the issues of OSH in mines on monthly basis. The composition of the committee including workmen's inspector is ideal for aiding development of SMP. Although the functions of the committee have been defined under statute, there is a need to outline its place in developing SMP for maximizing benefits.**

# Development of Safety Management Plan (SMP)

- ***Hazard identification & Risk Management***

**Formation of team: Mine Manager/Operations-in-charge as team leader, members may be suitably chosen from the following for carrying out hazard identification and risk management in mines.**

- ✓ **Safety officer**
- ✓ **Engineer (Mines)**
- ✓ **Workmen's Inspector(s)**
- ✓ **In-charge, mine production**

# **Development of Safety Management Plan (SMP)**

- ✓ **In-charge, mechanical maintenance**
- ✓ **In-charge, electrical maintenance**
- ✓ **In-charge, occupational health & hygiene**
- ✓ **In-charge, mine surveying**
- ✓ **Supervisor's and/or workmen selected from activities mentioned at (d), (e), (f), (g) and (h), including machine operators, fitters and electricians**
- ✓ **Rapporteur(s)**

# **Development of Safety Management Plan (SMP)**

**For advice and technical guidance regulators, eminent mining scientists, experts from academic & research institutions and representatives from manufacturers may be invited to participate in risk assessment sessions.**

**Team may co-opt members if considered necessary.**

# **Development of Safety Management Plan (SMP)**

**Tools of Risk Management: (a) Following documents may be arranged for consideration of team.**

- Minutes of safety committee meeting**
- Workmen's Inspectors report**
- Contraventions pointed out by regulators and action taken report**
- Safety officer's inspection report**
- Report (s) submitted by Internal Safety Organization, if any**

# **Development of Safety Management Plan (SMP)**

- **Previous risk assessment document, if any**
- **Report (s) on accidents and near misses**

**A study of the above reports may help in identifying key safety and health issues in different areas of mining operations.**

**(b) A computer system which supports Microsoft Office 2007 or its latest version and printer.**

# **Development of Safety Management Plan (SMP)**

**The developed Safety Management Plan in respect of a coal or metal mine may contain, among others the following:**

- Mine Safety & Health Policy;**
- Risk Assessment data sheets;**
- Hazard Control Plans for identified hazards;**
- A list of Hazard Control Plans with yellow Flag;**
- Audit sheets for Hazard identification and Control Plans;**

# **Development of Safety Management Plan (SMP)**

- **A list of Hazard Control Plans with Immediate Action Flag;**
- **A list of developed Code of Practices;**
- **A list of developed Standard Operating Procedures;**
- **Emergency Management Plan including TARP's and EIP's;**
- **Maintenance schedules of electrical equipments used in the mine;**
- **Maintenance schedules of mechanical equipments used in the mine; and**
- **Safety manuals of electrical & mechanical equipments used in the mine.**

# **Development of Safety Management Plan (SMP)**

**The list of Hazard Control Plans with yellow and Immediate Action Flag need to be accorded due priority by Agent & Owner. A copy of correspondences made with concerned authorities and agencies regarding mitigation of identified hazards in the mine may be kept for records.**

# **New challenges in managing OSH**

**The introduction of this new approach would require regulators to focus on the way the OSH is managed centrally, referring to individual examples of compliance or non-compliance to indicate how well the enterprise as a whole is actually managing OSH.**

**This may require a comprehensive and systematic evaluation of the enterprise's OSH systems, but more often it involves inspectors making a judgment about the competence of the enterprises management to manage OSH on day to day basis.**

## **New challenges in managing OSH**

**It means forming an opinion about how well managers assess risks and takes action to control them, managing and maintaining necessary preventive measures. Thus labour inspectors have to consider the enterprise's OSH policy and organization, if such exist, the competence and responsibilities of its staff in matters of OSH, levels of OSH training and supervision etc., using practical examples from the workplace to demonstrate such competence or otherwise.**