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Manual on Internal Audit of Risk Management in the Mining Sector



Internal Audit and Assurance Standards Board
The Institute of Cost Accountants of India
(Statutory body under an Act of Parliament)

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FORWARD OF THE PRESIDENT

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List of Acronyms/ abbreviations used

AI	Artificial Intelligence
ATR	Action Taken Report
BOD	Board of Directors
CG	Corporate Governance
CISO	Chief Information Security Officer
CMA	Cost & Management Accountant
CMD	Chairman & Managing Director
CPCB	Central Pollution Control Board
CPSE	Central Public Sector Enterprise
CRO	Chief Risk Officer
DGMS	Directorate General of Mines Safety
DMP	Disaster Management Plan
ECC	Emergency Control Centre
ERM	Enterprise Risk Management
ESG	Environmental, Social & Governance
FTA	Fault Tree Analysis
GHG	Green House Gas
HoD	Head of Department
HWM	Hazardous Waste Management
IA	Internal Audit
INR	Indian Rupee
LCG	Loss Control Group
LODR	Listing Obligations & Disclosure Requirements
LTO	License to Operate
OB	Overburden
PRAT	Proportional Risk Assessment Technique
RMC	Risk Management Committee
RMC	Risk Management Calendar
RMF	Risk Management Framework
RMT	Risk Management Team
ROI	Return on Investment
RTM	Risk That Matters
SEBI	Securities & Exchange Board of India
SMP	Site Management Plan
SMS	Safety Management System
SMT	Senior Management Team
TA	Task Analysis
TAC	Tariff Advisory Committee
TLV	Threshold Limit Values

CHAPTER 1: INTRODUCTION

PREFACE

There is a concomitant rise in the demand for good governance and the role played by the stakeholders entrusted with the responsibility of ensuring good governance. Being one of the stakeholders helping to strengthen and improve governance practices, the role of Internal Audit is assuming significance in the context of the changing environment.

This manual is solely intended for the use by the Internal Auditors executing their internal audit assignments in the Mining Sector. Wherever appropriate, references have been made to various articles, studies, and internal auditing standards to corroborate the thought process and/or elucidate the subject matter.

The objective is to guide and enable the organizations in setting up and effectively carrying out the Internal Audit function. The governance remit of Internal Audit is being progressively expanded laying down standards around the same. Internal Audit steadily needs to move up the value chain to provide more dependable assurance to the Management and the Board.

INTERNAL AUDIT STANDARDS

Internal Audit & Assurance Standards (IAAS) are a set of principle-based minimum requirements that are issued by and under the authority of any professional body. Internal audit standards have been devised by the various institutes like the Institute of Cost Accountants of India, or the Institute of Chartered Accountants of India or the Institute of Internal Auditors.

Internal auditing is conducted in diverse legal environments for entities that vary in size, complexity, nature, and structure. It may be performed by the entity's own employees or external firms. But conformance with these Standards is desirable in meeting the responsibilities of internal auditor in performing the internal audit activities. Any internal auditor should comply & conform while performing internal audit functions or services in any entity, individually or as member of the team. These Standards also provide the basis to evaluate responsibilities of the management in areas relating to internal audit and also the performance of internal auditors.

Internal Auditors must stay connected with the internal auditing standards issued by the appropriate authority(s) while rendering their services. The Internal Auditors should not

constrain or restrict their thought process but rather exercise prudence in elevating the maturity level of this critical function over time to ensure its relevance for sustenance.

It is recommended that Internal Auditors should continuously refer to the Standards, Guidance Notes and Manuals issued by the professional bodies/institutes to stay abreast of the developments in detail and enhance their knowledge.

CHAPTER 2: UNDERSTANDING INTERNAL AUDIT

DEFINITION

“Internal auditing is an **independent, objective assurance and consulting activity** designed to **add value and improve an organization's operations**. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of **risk management, control, and governance processes.**” – *As per Institute of Internal Auditors, Inc.*

Internal Audit has also been defined by other recognized Institutes and Organizations. However, all the definitions visualize the Internal Audit activity harmoniously with the aforementioned definition.

WHAT IS AN INTERNAL AUDIT?

Internal audits evaluate a company's internal controls, including its corporate governance and accounting processes. These types of audits ensure compliance with laws and regulations and help to maintain accurate and timely financial reporting and data collection. These audits also provide management with the tools necessary to attain operational efficiency by identifying problems and correcting lapses before they are discovered in an external audit.

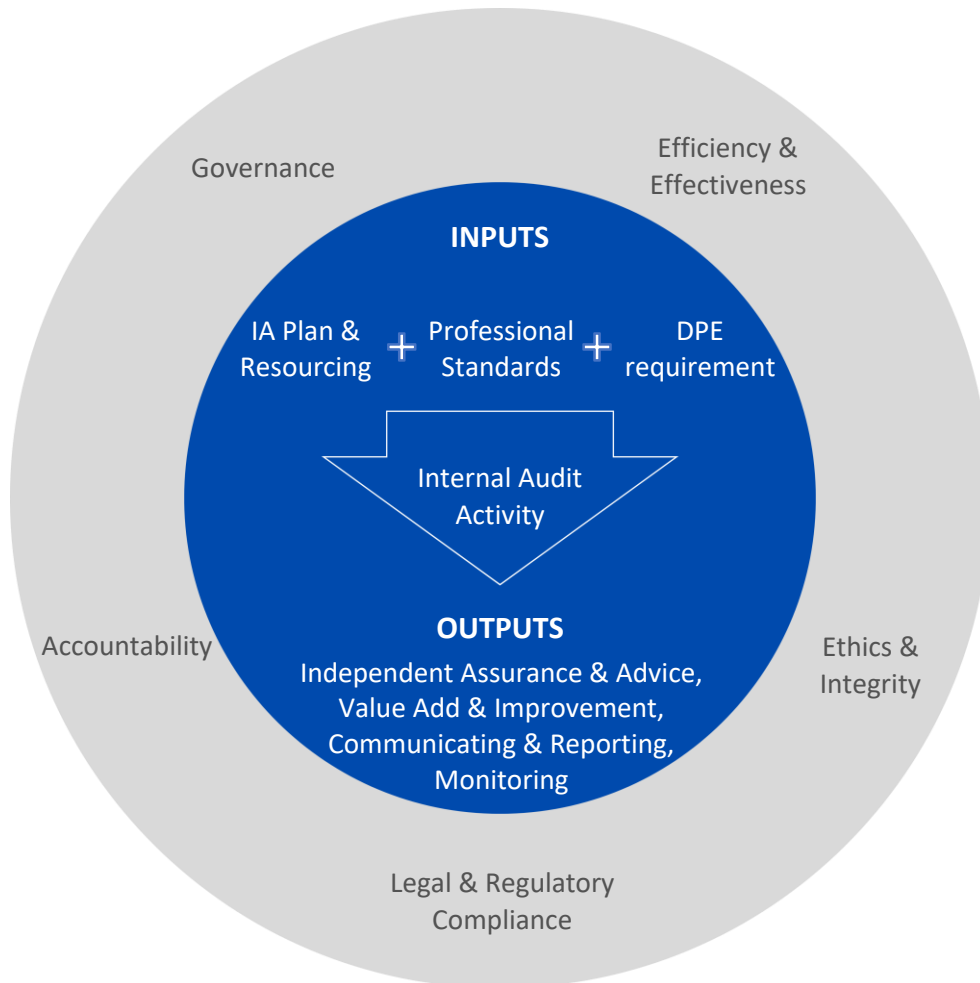
Internal auditors may be appointed from available resources or are hired by the companies who work on behalf of their management teams.

KEY CONCEPTS

- **Governance:** The processes and structures implemented by the Board to inform, direct, monitor, and manage the activities of the organization toward the achievement of its objectives. *Examples:* Code of Conduct; Whistle-blower Policy
- **Risk Management:** A process to identify, assess, manage, and control potential events or situations to provide reasonable assurance regarding the achievement of organization objectives. *Examples:* Risk Identification, Risk Assessment, Risk Treatment
- **Control:** The steps undertaken by the organization to manage risk and increase the likelihood of achieving objectives. *Examples:* Standard Operating Procedures; Segregation of Duties

Internal Auditors must remember that the Board and Senior Management rely on the internal audit function for ‘objective assurance’ and “insight’ into the effectiveness and efficiency of governance, risk management, and control processes. Therefore, it is necessary for the Internal Audit to ensure that the practice followed in the organization meets the widely accepted norms. The ultimate goal should be to enhance and protect the organizational value.

OVERALL FRAMEWORK – INTERNAL AUDIT



The above diagram illustrates the essential elements of the Internal Audit activity in the context of the organization.

- *Governance*: Internal Audit is an integral component of effective governance. A strong and mature governance process helps internal audit activity to be effective in the organization.

- *Accountability*: Accountability for funding lies with the governing body and the finance function. Internal audit must consider the effective use of the funds as part of the audit plan and should consider controls in all the organizational processes to protect the reliability and integrity of the financial information.
- *Ethics & Integrity*: The internal auditors must display the highest level of ethics and integrity in their work to establish and maintain credibility with their internal and external stakeholders.
- *Legal & Regulatory*: The internal auditors must be familiar with the laws, rules, and regulations that govern the organization and consider all legal aspects while carrying out their work.
- *Efficiency & Effectiveness*: The internal auditors must ensure that the results of their work add value to the organization and all including external stakeholders.

PROVISIONS UNDER THE COMPANIES ACT, 2013

As per the Companies Act, 2013, “The Internal Audit is an independent management function, which involves a continuous and critical appraisal of the functioning of an entity with a view to suggest improvements thereto and add value to and strengthen the overall governance mechanism of the entity including entity’s strategic risk management and internal control system.”

It is further mentioned that Internal Controls are systematic measures (such as reviews, checks and balances, balances, methods and procedures) instituted by an organization to

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1. conduct its business in an orderly and efficient manner,
2. safeguard its assets and resources,
3. deter and detect errors, fraud, and theft,
4. ensure accuracy and completeness of its accounting data,
5. produce reliable and timely financial and management information, and
6. ensure adherence to its policies and plans.

Section – 138 of the Companies Act’2013 discusses the appointment of Internal Auditors follows -

- (1) Such class or classes of companies as may be prescribed shall be required to appoint an internal auditor, who shall either be a chartered accountant or a cost accountant, or such

other professional as may be decided by the Board to conduct internal audit of the functions and activities of the company.

- (2) The Central Government may, by rules prescribe the manner and the intervals in which the internal audit shall be conducted and reported to the Board. Nothing is provided under the Act regarding removal of an Internal Auditor.

Provisions of section 138 of the Companies Act, 2013 read with rule 13 of the Companies (Accounts) Rules, 2014 prescribes the internal audit in specified companies. Accordingly, following companies are required to undertake internal audit –

- Every listed company;
- Every unlisted public company having,
 - Turnover of two hundred crore rupees or more *during the preceding financial year; or*
 - *paid-up share capital of fifty crore rupees or more during the preceding financial year; or*
 - *outstanding loans or borrowings from banks or public financial institutions exceeding one hundred crore rupees or more at any point in time during the preceding financial year; or*
 - *outstanding deposits of twenty-five crore rupees or more at any point of time during the preceding financial year; and*
- Every private company having,
 - *turnover of two hundred crore rupees or more during the preceding financial year; or*
 - *outstanding loans or borrowings from banks or public financial institutions exceeding one hundred crore rupees or more at any point in time during the preceding financial year:*

Provided that an existing company covered under any of the above criteria shall comply with the requirements of section 138 and this rule within six months of the commencement of such section.

Section 134, sub-section 5, clause (f) also states that the Directors' Responsibility Statement includes that directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively.

Companies (Auditor's Report) Order, 2020 requires that the auditor's report shall include a statement about whether the company has an internal audit system commensurate with the size and nature of its business; and whether the reports of the Internal Auditors for the period under audit were considered by the statutory auditor.

In addition, the Companies (Cost Records and Audit) Rules, 2014 require the Cost Auditor to certify whether the company has an adequate system of internal audit of cost records which is commensurate to the nature and size of its business.

TYPES OF INTERNAL AUDITS

Compliance Audit

A company may be required to adhere to local laws, compliance needs, government regulations, external policies, or other restrictions. To demonstrate compliance with these rules, a company may task an internal auditor to review, compile appropriate information, and provide an overall opinion on the status of the compliance requirement.

Internal Financial Audit

Public companies are required to perform certain levels of external financial auditing where a completely independent third party provides an opinion on the company's financial records. Companies may want to dive further into audit findings or perform an internal financial audit in preparation for an external audit. Many of the tests between an internal or external auditor may be similar; the nature of independence separates the two types of audits for financial audits.

Environmental Audit

As companies become continually more environmentally conscious, some take the steps of reviewing the business' impact on the planet. This results in an internal audit covering how a company safely sources raw materials, minimizes greenhouse gases emissions during production, utilizes eco-friendly distribution methods, and reduces energy consumption. Companies leveraging triple bottom line reporting may perform internal environmental audits as part of annual reporting.

Technology/IT Audit

An IT audit may have different objectives. The internal audit may be the result of an external lawsuit, a company complaint, or a target to become more efficient. An internal audit focused on technology reviews the controls, hardware, software, security, documentation, and backup/recovery of systems. The goal is likely to assess general IT accuracy and processing capabilities.

Performance Audit

An internal audit focused on performance pays less attention to the processes and more on the final result. The company will have set performance objectives/ goals or metrics that may be tied to performance bonuses or other incentives. As a result, an internal auditor assesses the outcome of an objective that may not be easily quantifiable.

For example, a company may wish to have expanded its use of diverse suppliers; the internal auditor, independent of any purchasing process, will be tasked with analysing how the company's spending patterns have changed since this goal was set.

Operational Audit

An operational audit is most likely to occur when key personnel leaves or when new management takes over an entity. The company may want to assess how things are done and whether resources are being used more efficiently. During an operational internal audit, the auditor will review whether current staff and processes fulfil the mission statement, value, and objectives of the company.

Construction Audit

Development, operating, real estate, or construction companies may perform construction audits to ensure not only appropriate physical development of a building but appropriate project billing along the life of the project. This mostly includes adherence to contract terms with the general contractor, sub-contractors, or standalone vendors as necessary.

This may also include ensuring the company has remitted the appropriate payments, collected the appropriate payments, and internal project reports regarding project completion are correct.

Risk Audit

In addition to ensuring that a company complies with laws and regulations, internal audits also provide a degree of risk management and safeguard against potential fraud, waste, or abuse. The results of internal audits provide management with suggestions for improvements to current processes not functioning as intended, which may include information technology systems as well as supply-chain management

OBJECTIVES OF INTERNAL AUDIT

Proper Control: One of the main objectives of an internal audit is to keep stringent control over all the activities of an organization. The management needs assurance of the authenticity of the financial records and the efficiency of the operations of the firm. An internal audit helps establish both.

Perfect Accounting System: An internal audit keeps a very close check on the accounting system of an organization. It checks everything from the vouchers to the authority of transactions to mathematical accuracy. All entries are verified against documents and other proof. Chances of mistakes or frauds are greatly reduced.

Review of Business: The purpose of an internal audit is to keep a check on the financial and operational aspects of a business. So as the current financial year is ongoing, internal audit can point out the mistakes, weak points, and strengths of the business. This will allow an ongoing review, instead of waiting till the year-end.

Asset Protection: In the process of internal audit, there is always a valuation and verification of an asset. There is also a physical verification of the ownership and possession of the asset.

And in case of special transactions like sale, purchase or revaluation of the asset, the authorization of this is also audited in an internal audit. Hence, the assets enjoy complete protection.

Keeps a Check on Errors: In a financial audit, the auditor will be able to determine if any mistakes were made in the financial records. But this only happens at the end of the financial year. And the mistakes are corrected thereafter. But in case of an internal audit, the mistakes are spotted as soon as they are made and corrected immediately.

Detection of Fraud: In case the company has an internal audit in place, the detection of fraud becomes much easier. This is because there is a year-round check on the employees.

Understanding the risks and its mitigation: All companies / commercial organisations are facing different types of risks which threaten their operation, profit, production and even

existence. These organisation, therefore, take necessary steps to understand the risks and measures to mitigate them. Regular internal audit ensures that this work is being taken by the concerned officials seriously to avoid any complications in future.

INTERNAL AUDIT VS. EXTERNAL AUDIT

Internal and external audits have the same objective. Both types of audits analyse an aspect of a company to determine a specific opinion. However, there are many differences between the two types of audits.

In an internal audit, the company is often able to select its own audit team. As such, the team represents the interests of the company's management team. This may be advantageous to specifically place certain employees with very niche experience on the team. In an external audit, the company can often select the external audit firm; however, the company often does not have a say in the specific employees put on their external audit.

There may be some requirements regarding the external auditor depending on the audit. For example, in an external statutory cost auditor should be the member of The Institute of Cost Accountants of India with certificate of practice. On the other hand, in an internal audit, there may be no such requirement and any qualified and knowledgeable person can do the internal audit; although the preferences are given to qualifications like CMA (Cost and Management Accountancy) due to their efficiency, experience and audit related studies during acquiring qualification.

The end goal of either audit is an audit report; however, audit reports are used for very different reasons. An internal audit report is usually used by internal management to improve the operations, processes, or policies of the company. An external audit report is often required for an outside reason and is more often used heavier by stakeholders outside of the company.

Finally, the nature of the engagement will be very different. During an internal audit, the employees of a company may often freely give advice, discuss unrelated matters with the company, or may have a very fluid consulting agreement. During an external audit, a very defined scope is often set, and the external auditor will often take great care to ensure they do not exceed their audit boundaries.

INTERNAL AUDIT PROCEDURE

Normal Internal Audit procedure is as follows –

- Proposal from Company & Acceptance from Internal Auditor.

- Fixation of area/ scope of the Internal Audit assignment and remuneration duly approved by the Board / Audit Committee.
- Preparation of Internal Audit Plan & Strategy.
- Execution of Internal Audit Plan & Strategy.
- Escalate the matter of unnecessary interference in the Internal Audit work and non-cooperation by the Auditee's staff.
- Preparation of Preliminary Report with observations, findings, & recommendations of Internal Auditor.
- Internal Auditor should report significant observations, suggestions/ recommendations based on the policies, processes, risk, control and transactions processing.
- Management Comments and Action Taken Report.
- Submission of Final Report for the consideration of the Audit Committee/ Board of Director/ Managing Director.

INTERNAL AUDIT PROCESS

The internal audit process entails planning the audit, performing the audit procedures, compiling the audit report, and monitoring post-audit changes. Management may choose to expand the scope of an audit at any point of the audit if findings during the audit cause the scope to shift to a different direction.

Step wise Internal Audit Process

Step 1: Planning

Before any audit procedures are performed, the internal auditors often start by developing the audit plan. This sets the audit requirements, objectives, timeline, schedule, and responsibilities across audit team members. The audits may review prior audits to understand management expectations for presentation and data collection.

The audit plan often has a checklist to ensure members of the team adhere to broad expectations. The internal audit team may also pre-emptively plan to meet with management throughout the audit to communicate the status and any struggles of the audit. The planning

stage often ends with a kick-off meeting that launches the audit and communicates the initial information needed.

Step 2: Auditing

Many of the auditing procedures used by internal audits are the same as external auditors. Some companies might use continuous audits to ensure ongoing oversight of company practices. Assessment techniques ensure an internal auditor gathers a full understanding of the internal control procedures and whether employees are complying with internal control directives.

To avoid disrupting the daily workflow, auditors begin with indirect assessment techniques, such as reviewing flowcharts, manuals, departmental control policies, or other existing documentation.

Auditing fieldwork procedures can include transaction matching, physical inventory count, audit trail calculations, and account reconciliation as is required by law. Analysis techniques may test random data or target specific data if an auditor believes an internal control process needs to be improved.

The internal audit may have started with a defined scope; but as the internal audit team gathers and analyses information, it may become necessary to redefine the purpose and extent of the audit. This includes re-evaluating the original timeline or resources allocated to the audit.

Step 3: Reporting

Internal audit reporting includes a formal report and may include a preliminary or memo-style interim report. An interim report typically includes sensitive or significant results, the auditor thinks the board of directors needs to know right away. Like an interim financial statement, an interim auditor communicates a partial set of information useful for laying the road for the remaining portion.

Often, a company may deliver a draft copy of the final audit report and host a pre-close internal audit meeting with management. This may allow management to provide rebuttals, additional information that may change findings, or provide commentary on their feedback regarding the audit findings.

The final report includes a summary of the procedures and techniques used for completing the audit, a description of audit findings, and suggestions for improvements to internal controls and control procedures. The final report may also communicate next steps in terms of changes to be implemented, future monitoring processes, and what future reviews will entail.

Step 4: Monitoring

After a designated amount of time, an internal audit may call for follow-up steps to make sure the appropriate post-close audit changes were implemented. The details and process for these monitoring and review steps is often agreed to at the delivery of the final audit.

For example, an internal financial audit may find severe internal control deficiencies that an internal auditor believes will not pass an external financial audit. Management agreed to implement changes within the next six weeks. After six weeks, the internal auditor may be tasked with implementing a small-scope or limited review of the deficiency to see if the issue still persists.

INTERNAL AUDIT REPORTS: THE 5 C's

Internal audit reports are often known for adhering to the 5 C's reporting requirement. A complete, sufficient internal audit often ends with a summary report that communicates answers to the following questions:

- **Criteria:** What particular issue was identified, and why was the internal audit necessary? Is the internal audit in preparation for a future external audit? Who requested the audit, and why did this party request the audit?
- **Condition:** How is the issue in relation to a company target or expectation? Does the company have a policy that was broken, a benchmark that was not met, or other condition that was not satisfied? Is the company confident no issue is existing, or do they believe an issue is at hand?
- **Cause:** Why did the issue arise? Who was involved, what processes were broken, and how could the issue have been avoided?
- **Consequence:** What is the outcome of the problem? Are issues limited to internal matters, or are there risks of external consequences? What are the financial implications of the issue?

- **Corrective Action:** What can the company do fix the problem? What specific steps will management take to resolve the issue, and what type of monitoring or review will occur after solutions have been put in place to ensure a fix has been implemented?

IMPORTANCE OF INTERNAL AUDIT

Some may think internal audits are not as valuable as external audits. After all, a company may hand-pick its own internal audits who do not have full independence from the company. However, there are many ways internal audits provide value to the company and external parties:

- Management can be more efficient about what to explore. For example, while external financial audits must test an entire financial system, a company may be concerned about whether the cash management process is being fraudulently managed; therefore, management can elect to have all audit procedures analyse cash processes.
- Internal audits may save companies money. If a company's processes are very strong, the external audit process may not be as long and as intensive, thereby reducing the external audit fee and time spent supporting external auditors.
- The company enhances its control environment. Even if the internal audit yields no findings, employees may be aware that their work gets analysed and reported on, thereby motivating adherence to company policy.
- Internal audits may make companies more efficient. External audits often are not intended to make processes better; they are meant to review whether processes are accurate. This distinction is important because a company may be "just getting by" with inefficient processes that meet very minimum requirements.
- Internal audit reports give management a head start to make corrections. Instead of having to scramble when an external audit finds a deficiency, management can take longer to think through solutions, implement the solution with care, and review whether the solution worked.
- Certain departments may need enhanced oversight. Whether it is lack of expertise, staffing shortages, or problem with current personnel, a company may benefit from targeting a specific area and formally reviewing its workflow and processes.

CONTENT OF INTERNAL AUDIT REPORT

The Internal Audit Report should cover the following contents:

- Title
- Addressee
- Period of coverage of the Report
- Opening or introductory paragraph
- Objective paragraph
- Scope paragraph
- Documents / Records checked during internal audit
- Executive summary, highlighting the key material issues, observations, control, weaknesses and exceptions
- Significant observations, findings and recommendations
- Management comments on respective observations, findings and recommendations
- Action Taken Report
- Date of Report
- Place of signature
- Internal Auditor's signature with Membership No.

CHAPTER 3: UNDERSTANDING RISK MANAGEMENT

DEFINITION OF RISK

Risk is any event/non-event, the occurrence/non-occurrence of which can adversely affect the objectives of the Company. These threats may be internal/ external to the Company, may/may not be directly influenced by the Company and may arise out of routine/non-routine actions of the Company.

UNDERSTANDING RISK MANAGEMENT

Risk Management is a structured, consistent and continuous process across the whole organization for identifying, assessing, deciding on responses to and reporting on the opportunities and threats that may affect the achievement of its objectives.

In recent years, all sectors of the economy have focused on risk management as the key to making organizations successful in delivering their objectives, whilst protecting the interests of their stakeholders. Risk may be defined as an event, action or inaction, the outcome of which is uncertain and may have a bearing on the achievement of desired goals and objectives.

The Company should realize the need to better understand, anticipate and mitigate business risks in order to minimize the frequency and impact of risks and shall look for greater assurance that there is a system in place, with well-documented, effective mitigation plans and accountability, which provides relevant information for decision making to the appropriate people in a timely manner.

Risk management is a holistic, integrated, structured and disciplined approach to managing risks with the objective of maximizing shareholder value. It aligns strategy, processes, people & culture, technology and governance with the purpose of evaluating and managing the uncertainties faced by the organization while creating value.

Effective risk management allows an organization to –

- have increased confidence in achieving its desired goals and objectives;
- effectively limit threats to acceptable levels; and
- make informed decisions about exploiting opportunities.

Never before has effective management of business risks been so critical to achieve

positive results and to enhance corporate reputation, as it is today. It has been observed that although significant risks are often known in some parts of the company, those risks may not have come to the attention of the right people at the right time.

A robust risk management framework has therefore been developed which is benchmarked with the leading global risk management standards and guidance available. In doing so the focus has been to have a framework that is simple and practical, which:

- allows a clear and concise view of risks;
- prioritise risks that matter ('RTM') i.e. the 'Top 15' risks; and
- put in place appropriate mitigation plans to manage the RTMs.

This Framework will continue to evolve and mature as risk management is implemented in the organization and experience is gained. It is expected to be reviewed and amended on a regular basis to ensure its ongoing relevance and viability. The Board of Directors / Risk Management Committee shall have the discretion to modify the risk management framework as per the most relevant business case as this framework is dynamic in nature and evolves with time.

Risk management is everyone's responsibility and needs to form part of every decision making and monitoring process. The Risk Management and Risk Mitigation Strategy (Risk Management Policy) thus aims at outlining the framework adopted to assess and mitigate the impact of risks and report to the top management and the Board of Directors on the risk assessment and minimization procedures.

Risk management is the process of identifying, assessing and controlling threats to an organization's capital, earnings and operations. These risks stem from a variety of sources, including financial uncertainties, legal liabilities, technology issues, strategic management errors, accidents and natural disasters.

A successful risk management program helps an organization consider the full range of risks it faces. Risk management also examines the relationship between different types of business risks and the cascading impact they could have on an organization's strategic goals.

This holistic approach to managing risk is sometimes described as *enterprise risk management* (ERM) because of its emphasis on anticipating and understanding risk across an organization. In addition to a focus on internal and external risk threats, enterprise risk management (ERM) emphasizes the importance of managing *positive* risk. Positive risks are opportunities that could increase business value.

Indeed, the aim of any risk management program is not to eliminate all risk but to preserve and add to overall enterprise value by making smart risk decisions. It is also a fact that all risks can never be eliminated, they can be brushed aside for a limited period and this process of brushing aside keeps on going with the normal business process. Any delay or casual approach in this brushing aside of risks can be dangerous and fatal for the company.

Thus, a risk management program should be intertwined with organizational strategy. To link them, risk management leaders must first define the organization's risk appetite, i.e., the amount of risk it is willing to accept to realize its objectives. Some risks will fit within the risk appetite and be accepted with no further action necessary. Others will be mitigated to reduce the potential negative effects, shared with or transferred to another party, or avoided altogether.

Every organization faces the risk of unexpected, harmful events that can cost it money or human life or, in the worst case, cause it to close.

OBJECTIVES OF RISK MANAGEMENT

The components of risk management are different for different companies and are defined by the company's business model and strategies, organizational structure, culture, risk appetite and dedicated resources. It is not a standard "fit-all" solution. An effective risk management framework requires consistent processes for assessment, mitigation, monitoring and communication of risk issues across the organization. Essential to this process is its alignment with corporate direction and objectives, specifically strategic planning and annual business planning processes.

Risk management is a continuous and evolving process, which has to be integrated with the culture of the organization over a period of time. It would then get embedded in the strategy for attaining tactical and operational objectives such that each manager and employee in the system is assigned responsibility for management of risk as a part of their job description. It would then support accountability, performance measurement and reward, and thus promote overall efficiency at all levels.

The framework will help in creating an environment in which risk management is consistently practiced across the Company and where management can take informed decisions to reduce the possibility of surprises.

The objectives of risk management are to:

- ❖ Better understanding of the Company's risk profile;

- ❖ Ensure that the Senior Management is in a position to make informed business decisions based on risk assessment;
- ❖ Sound business opportunities are identified and pursued without exposing the business to an unacceptable level of risk;
- ❖ Contribute to safeguard Company value and interest of shareholders; and
- ❖ Improve compliance with good corporate governance guidelines and practices as well as laws & regulations.

The Risk Management Policy aims at formalizing a process to deal with the most relevant risks, building on existing management practices, knowledge and structures.

IMPORTANCE OF RISK MANAGEMENT

Risk management has perhaps never been more important than it is now. The risks that modern organizations face have grown more complex, fuelled by the rapid pace of globalization. New risks are constantly emerging, often related to and generated by the now-pervasive use of digital technology or due to climate change which has been dubbed a "threat multiplier" by risk experts.

A recent external risk that initially manifested itself as a supply chain issue at many companies -- the COVID-19 pandemic -- quickly evolved into an existential threat, affecting the health and safety of employees, the means of doing business, the ability to interact with customers and corporate reputations. Businesses made rapid adjustments to the threats posed by the pandemic. But, going forward, they started grappling with novel risks, including the issue of how or whether to bring employees back to the office.

Similarly, after covid the commercial organisations started facing the critical questions like that what can be done to make supply chains less vulnerable or how to tackle the inflation and the business & economic effects of the war in Ukraine etc.

In many companies, business executives and the board of directors are now taking a fresh look at their risk management programs. Organizations are reassessing their risk exposure, examining risk processes and reconsidering who should be involved in risk management. Companies that currently take a reactive approach to risk management -- guarding against past risks and changing practices after a new risk causes harm -- are considering the competitive advantages of a more proactive approach. There is heightened interest in supporting business

sustainability, resiliency and agility. Companies are also exploring how AI (Artificial Intelligence) technologies and sophisticated GRC platforms can improve risk management.

REGULATORY FRAMEWORK SURROUNDING RISK MANAGEMENT

The SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015

- ◆ In India, from a regulatory perspective, the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015 (“SEBI LODR”) has elaborately prescribed the role & functions of the Board of Directors and Risk Management Committee with respect to the domain of risk management. Relevant extracts are given below.
- ◆ The Board of Directors shall constitute a Risk Management Committee. The Chairperson of the Risk management committee shall be a member of the board of directors and senior executives of the listed entity may be members of the committee. The risk management committee shall meet at least twice in a year.
- ◆ The Board of Directors shall define the role and responsibility of the Risk Management Committee and may delegate monitoring and reviewing of the risk management plan to the committee and such other functions as it may deem fit. Such functions shall specifically cover cyber security.
- ◆ The Risk Management Committee shall have powers to seek information from any employee, obtain outside legal or other professional advice and secure attendance of outsiders with relevant expertise, if it considers necessary.
- ◆ The role of the Risk Management Committee shall, *inter alia*, include the following:
 - To formulate a detailed risk management policy which shall include:
 - A framework for identification of internal and external risks specifically faced by the listed entity, in particular including financial, operational, sectoral, sustainability (particularly, ESG related risks), information, cyber security risks or any other risk as may be determined by the Committee.
 - Measures for risk mitigation including systems and processes for internal control of identified risks.
 - Business continuity plan.

- To ensure that appropriate methodology, processes and systems are in place to monitor and evaluate risks associated with the business of the Company;
 - To monitor and oversee implementation of the risk management policy, including evaluating the adequacy of risk management systems;
 - To periodically review the risk management policy, at least once in two years, including by considering the changing industry dynamics and evolving complexity;
 - To keep the board of directors informed about the nature and content of its discussions, recommendations and actions to be taken;
 - The appointment, removal and terms of remuneration of the Chief Risk Officer (if any) shall be subject to review by the Risk Management Committee.
- ◆ Besides, the role of the audit committee shall include evaluation of internal financial controls and risk management systems.
 - ◆ Further, the SEBI LODR, inter alia, requires the listed entity to lay down procedures to inform members of Board of Directors about risk management and minimization procedures [Regulation 17(9)(a)]. The Board of Directors shall be responsible for framing, implementing and monitoring the risk management plan for the listed entity [Regulation 17(9)(b)].
 - ◆ Regulation 24(4) of SEBI LODR requires that the management of the unlisted subsidiary shall periodically bring to the notice of the Board of Directors of the listed entity, a statement of all significant transactions and arrangements entered into by the unlisted subsidiary.
 - ◆ Regulation 30(9) of SEBI LODR requires the listed entity to disclose all events or information with respect to subsidiaries which are material for the listed entity.
 - ◆ Regulation 16(1)(c) of SEBI LODR defines material subsidiary as – “material subsidiary” shall mean a subsidiary, whose income or net worth exceeds ten percent of the consolidated income or net worth respectively, of the listed entity and its subsidiaries in the immediately preceding accounting year.” Further, the Explanation to Regulation 16 (1)(c) states that the listed entity shall formulate a policy for determining material subsidiary.

The Companies Act, 2013

- ◆ The Companies Act, 2013, requires the Boards of Directors to present a statement indicating development and implementation of a Risk Management Policy for the company, including identification therein of elements of risk, if any, which in the opinion of the Board may threaten the existence of the company [Section 134(3)(n)].
- ◆ Further, the Audit Committee is also required, inter alia, to evaluate the risk management systems of the Company [Section 177 (4) (vii)].

CPSE Guidelines on Corporate Governance

There exists **Guidelines on Corporate Governance for Central Public Sector Enterprises (“CPSEs CG Guidelines”)**, which are mandatory for all CPSEs vide Office Memorandum No. 18(8)/2005-GM dated 14th May 2010. Para 3.6 (Risk Management) of the Guidelines on Corporate Governance for CPSEs provides that **Enterprise risk management** helps management in achieving CPSE’s performance and profitability targets. It helps to ensure effective reporting and compliance with laws and regulations and helps avoid damage to the entity’s reputation and associated consequences. Considering the significance of risk management in the scheme of corporate management strategies, its oversight should be one of the main responsibilities of the Board/ Management. The Board should ensure the integration and alignment of the risk management system with the corporate and operational objectives and also that risk management is undertaken as a part of normal business practice and not as a separate task at set times.

Further, para 7.3 (Board Disclosures–Risk management) provides that the company shall lay down procedures to inform Board members about the **risk assessment and minimization procedures**, which shall be periodically reviewed to ensure that executive management controls risk through means of a properly defined framework. Procedure will be laid down for internal risk management also. It further says that **Board should implement policies and procedures** which should include:

- a) Staff responsibilities in relation to fraud prevention and identification.
- b) Responsibility of fraud investigation once a fraud has been identified.
- c) Process of reporting on fraud related matters to management.
- d) Reporting and recording processes to be followed to record allegations of fraud.
- e) Requirements of training to be conducted on fraud prevention and identification.

CHAPTER 4: INTERNAL AUDIT OF RISK MANAGEMENT

BACKGROUND

Internal auditors play a critical role in risk management without taking over the responsibilities of risk management and compromising internal auditors' objectivity and independence. They understand the potential risks that may impact the organization and analyse the modality, framed by the company to mitigate these risks. They ensure that the organisation is following the pre-decided risk mitigation policy holistically and any deviation is highlighted. They also help the organization implement these measures seriously. Internal auditors help the organization proactively manage its risks and reduce the likelihood of negative outcomes. Internal auditors can reduce duplicate efforts and increase the effectiveness of overall risk management by coordinating the internal audit reports with risk management team.

IMPLEMENTATION

Internal auditors can help the management on the implementation of the system of risk management, by taking following steps -

Step 1: Understanding Risks: The first step in the risk management process is to identify potential risks that may impact the organization. Internal auditors use various methods, such as interviews, surveys, and analysis of historical data, to understand these risks.

Step 2: Assessing Risks: Once the risks have been identified & understood, the next step is to assess their likelihood to take place and its impact. Internal auditors use a risk matrix to evaluate the potential impact of each risk and prioritize them based on their likelihood and impact.

Step 3: Recommend Mitigation Measures: Based on the assessment of the risks, internal auditors then help in providing recommendations on how to mitigate these risks. For example, they may recommend the implementation of controls, such as policies and procedures, to minimize the likelihood of a risk occurring.

Step 4: Implement Mitigation Measures: After the recommendations have been made, the internal auditors help the organization implement these measures. They monitor the implementation process and provide feedback to management on the effectiveness of the measures.

COMPLIANCE

Internal auditors are also helpful for assuring that the organization complies with laws and regulations. They review the policies and procedures of the company and assess their effectiveness. They also monitor the company's compliance with regulations and provide recommendations on how to improve compliance. They can help by taking following steps -

Step 1: Review Policies and Procedures: The first step in ensuring compliance is to review the policies and procedures of the organization. Internal auditors assess these policies and procedures to ensure that they are effective in achieving compliance.

Step 2: Monitor Compliance: Once the policies and procedures have been reviewed, the internal auditors monitor the organization's compliance with laws and regulations. They use various methods, such as testing and documentation review, to assess the organization's compliance.

Step 3: Provide Recommendations: Based on their assessment of the organization's compliance, internal auditors then provide recommendations on how to improve compliance. For example, they may recommend changes to policies and procedures, or the implementation of additional controls, to ensure compliance.

Step 4: Implement Recommendations: The internal auditors then help the organization implement these recommendations and monitor the effectiveness of the changes. They also provide ongoing support to management in ensuring ongoing compliance with laws and regulations.

INTERNAL CONTROL

Internal auditors are also quite helpful for evaluating the internal controls of the organization. They examine the processes and procedures that are in place to ensure the accuracy and reliability of financial and operational information. They then provide recommendations on how to improve these controls and help the organization maintain a strong internal control environment-

Step 1: Evaluate Controls: The first step in evaluating internal controls is to examine the processes and procedures that are in place to ensure the accuracy and reliability of financial and operational information. Internal auditors use various methods, such as testing and documentation review, to evaluate the internal controls of the organization.

Step 2: Provide Recommendations: Based on their evaluation of the internal controls, internal auditors then provide recommendations on how to improve these controls. For example, they may recommend changes to policies and procedures or the implementation of additional controls to ensure the accuracy and reliability of information.

Step 3: Implement Recommendations: The internal auditors then help the organization implement these recommendations and monitor the effectiveness of the changes. They also provide ongoing support to management in maintaining a strong internal control environment.

Step 4: Continuous Monitoring: Internal auditors also engage in continuous monitoring of the internal control environment. They review changes in the organization and assess the impact on internal controls. They also assess the effectiveness of existing controls and provide recommendations for improvement, as needed.

ADVISING MANAGEMENT

Internal auditors also act as advisors to management. They provide insights and perspectives on various business processes and help management make informed decisions. They also help management identify areas for improvement and provide recommendations on how to optimize these processes. Following steps are important in this line -

Step 1: Provide Insights and Perspectives: Internal auditors provide valuable insights and perspectives to management. They use their expertise to provide recommendations on various business processes and help management make informed decisions.

Step 2: Identify Areas for Improvement: Internal auditors also help management identify areas for improvement in the organization. They use their knowledge of best practices and industry standards to provide recommendations on how to optimize processes.

Step 3: Provide Recommendations: Based on their analysis, internal auditors provide recommendations on how to improve processes and optimize performance. They also assist management in implementing these changes and monitor the results.

Step 4: Ongoing Support: Internal auditors provide ongoing support to management, helping them navigate challenges and achieve their goals. They are a valuable resource for management, providing expertise, guidance, and support.

PROCESS IMPROVEMENT

Internal auditors are experts in process improvement. They identify areas for improvement in the organization and provide recommendations on how to streamline processes. They also assist in implementing these changes and monitor the results to ensure they are effective. Following steps are important -

Step 1: Identify Areas for Improvement: The first step in process improvement is to identify areas for improvement in the organization. Internal auditors use various methods, such as process mapping, to identify these areas.

Step 2: Provide Recommendations: Based on their analysis, internal auditors provide recommendations on how to streamline processes and optimize performance. They use their expertise in process improvement to provide practical and effective recommendations.

Step 3: Implement Recommendations: The internal auditors then help the organization implement these recommendations and monitor the results. They engage in continuous monitoring of the process to ensure that the changes are effective and provide feedback to management.

Step 4: Continuous Improvement: Internal auditors also engage in continuous improvement, identifying new areas for improvement and providing recommendations for optimization. They help the organization maintain a culture of continuous improvement, ensuring that processes are optimized and performance is improved over time.

In fact, the role of internal auditors goes far beyond just providing assurance services. They play a critical role in risk management, compliance, internal control, advising management, and process improvement. Their expertise and insights help organizations achieve their goals and succeed in an ever-changing business

CHAPTER 5: RISK MANAGEMENT AND RISK MITIGATION IN MINING COMPANIES

INTRODUCTION

The heart of risk management in mining is the identification of internal & external hazards, assessment of their risk, and application of appropriate controls. Regardless of whether the hazard is geological, environmental, process or human, they should all be addressed through effective risk management.

While defining and developing a formalized risk assessment and mitigation process, leading risk management standards and practices shall be considered. However, the focus shall be to make the process relevant to business reality and to keep it pragmatic and simple from an implementation and use perspective.

RISK MANAGEMENT FRAMEWORK

Mining Companies should establish a robust risk management framework to effectively address and mitigate potential risks. The framework will encompass various mechanisms for defining, prioritising, and formulating contingency strategies to tackle risks. It will outline the roles, responsibilities, and duties of different authorities, committees, and the Board in executing risk management procedures. A comprehensive Risk Management Calendar (RMC) may be followed to ensure periodic monitoring and evaluation of risks.

GUIDING PRINCIPLES FOR THE RISK MANAGEMENT FRAMEWORK

The company's attitude to risk shall be based on the following key principles:

- i. **Shareholder value based:** Risk management will be focused on sustaining the creation of shareholder value and protecting the same against erosion.
- ii. **Embedded:** Risk management will be embedded in existing business processes to help management of risks across processes on an ongoing basis.
- iii. **Supported and Assured:** Risk management will provide support in setting up appropriate processes to ensure that current risks are being managed appropriately and assurance is provided to the relevant stakeholders over the effectiveness of these processes.

- iv. **Reviewed:** The effectiveness of the risk management program will be reviewed on a regular basis to ensure its relevancy in a dynamic and changing business environment.

The Risk management framework outlines the series of activities and their enablers that the Company proposes to deploy to assess mitigate and monitor risks across the organization. The objective of Risk management framework shall be to formalize and communicate the approach to the management of the risk. It will have the following attributes:

- Responds to the Executive management's need for enhanced risk information and improved governance.
- Provides the ability to prioritize, manage and monitor the increasingly complex risks in the business.
- Provides an explicit, comprehensive process to satisfy the regulators and other stakeholders, that significant risks are being effectively managed.

The Risk Management Framework shall comprise essentially of following two elements:

- Risk management structure
- Risk Management Process

RISK MANAGEMENT STRUCTURE AND TEAM

The risk management process has to be supported by a risk management structure which primarily shall comprise of the following:

- Risk Management and Oversight Structure
- Risk Policies and Procedures
- Risk Management Activity Calendar

A specialised subcommittee of the Board of Directors that forms the Risk Management Committee (RMC) should be formed first. The Chief Risk Officer (CRO), supported by a competent team, should operate under the guidance of the Risk Management Committee (RMC).

The RMC will provide strategic direction and evaluates the effectiveness of the Risk Management Framework. Risk assessment, identification, and mitigation measures should be thoroughly discussed during the bi-annual Risk Management Committee meetings.

Review of the effectiveness of Risk Management Framework is essential as an integral part of the strategic planning process. By adhering to a comprehensive risk management framework, the aim is to proactively address potential risks, safeguard the operations, and ensure sustainable growth. the risk landscape and formulates prioritised risk mitigation plans for overseeing its implementation across the organisation. The RMC provides strategic direction and evaluates the effectiveness of the Risk Management Framework

RISK MANAGEMENT CULTURE

Significant steps should be taken to foster a strong risk management culture in the company. The Board should approve a Risk Management Charter and Risk Register to effectively address risks and align it with the internal goals and objectives. The identification of Risk That Matters (RTM), should be carried out, and dedicated Risk Owners and Risk Mitigation Plan Owners should be appointed to ensure continuous monitoring and mitigation efforts. Risk assessment, identification, and mitigation measures should be thoroughly discussed during the bi-annual Risk Management Committee meetings. Consistently review of the effectiveness of the Risk Management Framework as an integral part of the strategic planning process is very much essential. By adhering to a comprehensive risk management framework, the aim should be to proactively address potential risks, safeguard the operations, and ensure sustainable growth.

RISKS IDENTIFICATION

In order to manage risks an organization needs to know what risks it faces. Risk identification captures the significant risks that may have an adverse impact on the organization's objectives and is the first step in building the organization's risk profile. In this regard, the focus should be on strategic / business risks that may have an impact on the ability of the company to achieve its planned targets. In stating risks, care should be taken:

- To avoid stating impacts which may arise as being the risks themselves; and
- To avoid stating risks which do not have an impact on the objectives.

Equal care should be taken to avoid defining risks with statements, which are simply the converse of the objectives. A statement of a risk should encompass the cause of the impact,

and the impact to the objective, which might arise.

APPROACH FOR IMPLEMENTATION

Risk identification will be done by involving personnel at the senior and middle management level of all the key functions to achieve a holistic view of risks. The entire activity of risk identification shall be managed by the respective functional departments.

The frequency for conducting risk identification will be as follows:

Annual risk identification

On an annual basis, a risk profile for the business/functional department is prepared based on discussions with key management personnel. Existing risk libraries and management reports serve as a baseline for this exercise. This risk profile/library is revisited on a quarterly basis by the Functional Directors for their respective functions, to identify any new risk event that can adversely impact business objectives.

Risks that are identified are documented in a standard template. The risk library details the risk, its classification, its potential area of impact and functions that may play a role in managing it. The Company shall use a 'Risk Classification Framework' to create a common understanding of risks and to differentiate between the risk, its causes and eventual effects.

The quality and completeness of the risk identification is the responsibility of the Functional Director for the respective functional department. While the Risk Management Committee plays an active role in facilitating the *annual* risk exercise, the Functional Director / Risk Management Coordinator (delegated by Functional Director) for the functional department plays a predominant role in coordinating the quarterly risk assessment and reporting.

Concurrent risk identification

The occurrence of risks can never be predicted. However, it is imperative for the success of risk management that any risk which has emerged post the annual risk identification exercise is flagged off to the Risk Management Committee and senior management team for deliberation and initiation of action in line with the risk management process. This risk can be identified across the organization through the emerging Risk Log feature and this activity may be carried out once a quarter. The identified risks shall be mapped to the appropriate risk category in the risk classification framework.

Under the leadership of the Chief Risk Officer (CRO) and with the involvement of the concerned Heads of Departments (HoDs), a dedicated Risk Management team should implement the governance processes outlined in the Risk Management Framework. This includes formulating Risk Mitigation plans for the prioritised risks and addressing the Risks That Matters (RTM). The potential impacts of each identified risk on operations are required to be carefully assessed. Subsequently, a comprehensive mitigation plan should be devised to manage and minimise the potential adverse effects of these risks. Through this systematic approach, the aim is to enhance the risk management practices and ensure the smooth functioning of the operations.

RISK MANAGEMENT PROCESS

An effective risk management process shall consist of 4 broad level steps:

- **Establish Context:** Essential for defining objectives.
- **Assess:** Risk identification and prioritization.
- **Risk Management Competence Scan:** Assessment of the existing organizational capabilities in managing and mitigating the risks.
- **Mitigate and Monitor:** Developing the mitigation plans for identified risks that matters (RTM) and monitoring the effectiveness on a periodic basis.

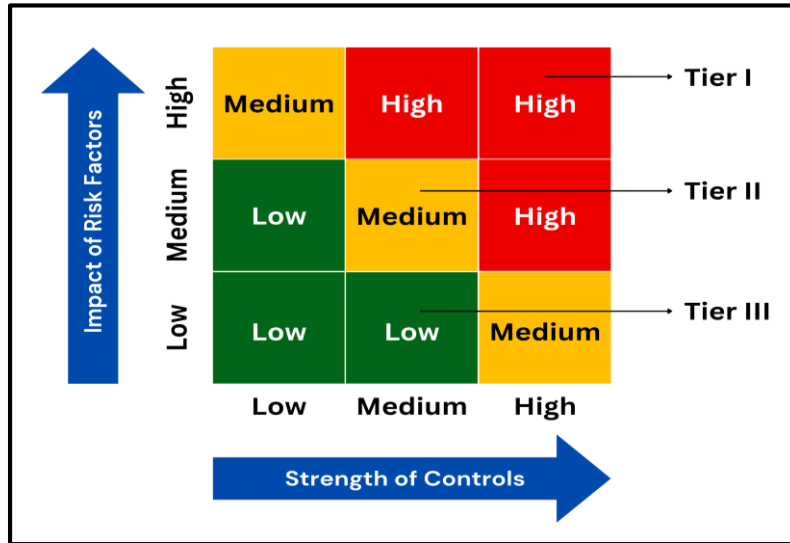
Whether risks are external or internal to the Company, or can be directly influenced/managed or not, these all shall be managed through a common set of processes.

This process shall be scheduled to be performed *annually* along with the business planning exercise or at any point of time on account of significant changes in internal business conductor external business environment. Where the business seeks to undertake a non-routine transaction (such as an acquisition, entering into a new line of business etc.), the risk management process is activated as a part of the proposal for undertaking such a transaction.

The overall risk management process covers:

- Risk Assessment and Reporting
- Risk Mitigation
- Risk Monitoring and Assurance

RISK



ASSESSMENT

Risk assessment is defined as the process of identification, prioritization and analysis of risks. An effective risk assessment requires a common risk language and a continuous process for identifying and measuring risks. These elements need to be applied consistently across the organization to understand the nature of the prioritized risks and their impact on business objectives, strategies and performance.

While assessing consider the potential ‘impact of risks’ and ‘strength of the control environment’. Thereafter, a residual risk matrix could be prepared with the strength of controls on the x-axis and the impact of risk factors on the y-axis. Based on residual risk rating, the processes could be categorized into Tier 1, Tier 2, and Tier 3 as given in the figure below.

Tier I (Processes) – Review once in a year

Tier II (Processes) – Review once in 2 years

Tier III (Processes) – Review once in 3 years

Risk assessment is an on-going systematic process to be carried out at periodic intervals. It consists of the following activities:

Setting the context: This step is focused on laying down the objectives that the Company seeks to achieve and safeguard. Risks are identified and prioritized in the context of these objectives.

Identifying and prioritising risks: Risk identification and prioritization comprises of the following:

- *Risk identification and definition* – Focused on identifying relevant risks that can adversely affect the achievement of the objectives. It seeks at creating/updating risk definitions to ensure undisputed understanding of the potential threat.
- *Risk classification* – Focused at understanding the various impacts of risks and the level of influence that the Company has on their root causes.
- *Risk prioritisation* – Focused at determining risk priority. This involves assessment of the various impacts taking into consideration the risk appetite of the Company.

Managing risks: It comprises of,

- *Risk mitigation* – Focused at addressing critical risks to restrict their impact(s) to an acceptable level (i.e. – within the defined risk appetite). This involves performing a risk competence scan to identify ongoing mitigation actions and any improvements required. This involves definition of ownership, responsibilities and milestones for the risk response plan of the Company.
- *Risk reporting and monitoring* – Focused at providing to the Board of Directors, CMD, Risk Management Committee, and Line Management periodic information on the risk profile and effectiveness of implementation of the mitigation plans.

RISK PRIORITIZATION

Risk prioritization is the process of rating the risks in order to identify those risks which may have the most significant impact on the achievement of the stated goals and objectives of the business. The identified risks shall be prioritized based on the following parameters:

- Inherent risk rating – It highlights the intrinsic nature of the risk to the business in the current environment irrespective of the existence or effectiveness of plans to mitigate it. Inherent risk is derived based on the rating of the impact the risk can have on the stated business objectives and the probability of its occurrence.
- Mitigation plan effectiveness rating – It is the rating assigned to the existing mitigation plans based on their operational efficiency in reducing either the impact of the risk or the probability of its occurrence.
- Approach for implementation – Risk prioritization shall be done by involving personnel at the senior and middle management level of all key functions, to get an overall view of the criticality of the risk as well as the effectiveness of the existing plans to mitigate the risk. The entire activity of risk prioritization shall be managed by the RMC.

The frequency for prioritizing risks will be as follows and this step involves identifying and selecting critical risks from the risk library:

Annual risk prioritization

In this process the finalized list of risks will be voted on by the identified personnel to determine their inherent risk rating and the effectiveness of the current mitigation plans. This activity shall be carried out after the annual risk identification exercise. Annual prioritization of the entity level risks would be done by the Risk Management Coordinator. Post compilation and analysis of the voting results the Risk Management Committee shall compile the list of risk in order of priority, clearly identifying the RTMs.

Concurrent risk prioritization

If new risks are identified as part of the quarterly risk review meetings, the participants shall vote on the risks to determine their inherent risk and the current effectiveness of the mitigation plans. The activity related to the compilation and analysis of voting result will be done by individual functional department, who shall then seek the approval of the Risk

Management Committee before including the new risk in the existing list of RTMs.

RISK REPORTING

Reporting is an integral part of any process and critical from a monitoring perspective. Results of risk assessment need to be reported to all relevant stake holders for review, input and monitoring.

The Risk Management Committee may be required to prepare on a quarterly basis a report detailing the following:

- List of applicable risks for the business;
- Highlighting the new risks identified, if any and the action taken w.r.t the new risks;
- Prioritized list of risks highlighting the ‘Risk That Matter’ (RTM);
- Root causes and mitigation plans for the RTMs; and
- Status of effectiveness of implementation of mitigation plans for the RTMs for all the risks till date through the self-assessment process (see below).

The Corporate Risk Management Committee may be required to report to the Board of Directors on a quarterly basis the following:

- An overview of the risk management process in place;
- Key observations on the status of risk management activities in the quarter, including any new risks identified and action taken w.r.t these risks.
- Status of effectiveness of implementation of the mitigation plan for RTMs

RISK MITIGATION

The process of Risk mitigation involves preparing the risk response plan for managing the RTMs and restricting the impact to a tolerable level. The entire process shall be broken down into the following activities:

- Root cause analysis to identify the reasons/drivers for existence of the risk;
- Development of mitigation plans with defined ownership and implementation timelines;

- Assessing the existing processes and activities presently undertaken to address the risks;
- In view of the root causes, identifying any gaps in the existing controls environment;
- Designing additional mitigation strategies to address the risk; and
- Documenting a mitigation plan with timelines and responsibilities (including existing and proposed activities).

RISK MONITORING & REPORTING

This step involves reviewing the results of the risk management framework to assess if risks are well controlled. The risk monitoring and reporting process helps in evaluating any new Risks That Matter which can adversely impact the business.

Risk Monitoring

On a *quarterly* basis, the status of risk management shall be reviewed. While assessing the risk, the following shall be taken care:

- Assesses if any additional risk has emerged that is already not considered in the risk profile;
- Assesses if a new risk/another risk that is already documented in the risk profile should be considered as a RTM;
- Nominates a Risk Owner for a new RTM and oversees the development of mitigation plans;
- For the RTM, assesses the performance of the business in managing the risk;
- Reviews the extent to which the mitigation plans have been implemented; and
- Based on quantifiable data (where possible), assess if the mitigation plans have delivered the right results in terms of risk management. To facilitate the above exercise, the following personnel shall provide the information.
 - **Risk Owner:** The designated Risk Owner provides a self-assessment on the extent of risk mitigation. This assessment is based on feedback on implementation of the mitigation plans and review of data (where applicable)

with respect to risk performance.

- **Mitigation Plan Owner:** The Mitigation Plan Owners indicates to the risk owners, the extent to which they have been able to implement the mitigation strategies. They also provide a qualitative assessment of the efficacy of the mitigation plans.

Risk Reporting

The results of the risk assessment are compiled in a risk reporting pack for each functional department by the respective Risk Management Coordinator for the functional department. These risk reporting packs shall be presented to the Risk Management Committee for its review and appraisal.

On an **annual** basis, the Risk Management Committee makes a formal presentation on the Risk Management Activities to the Board of Directors. This shall include:

- An overview of the risk management process in place;
- Summary of the Risks That Matter across the Company; and
- Results of Risk Management.

CHAPTER 6: EXTERNAL RISKS IN THE MINING SECTOR

WHY MINING SECTOR

Mining is always considered a risky business. External Risks, which are beyond the control of mining companies, play a crucial role in smooth operation of mining sectors. Generally, these risks cannot be mitigated at the companies' level and support of the Government and its agencies are very much required.

Mining Companies should identify the external risks, associated with them and make strategies to reduce its impact upon them. Usually, External Risks are not within the controlling capabilities of the companies. These risks arrive due to change in the economic, legal, political, social, environmental environments. Companies can reduce the impact of these risks by maintaining good relations with the Government, bureaucrats, law enforcing agencies etc and by taking the help of strategists.

Strategists of the companies shall keep close eye on the external factors of risks and advice the management to mitigate them with strategic management and strategic planning. Companies should hire experts like Cost and Management Accountants (CMAs) or MBAs from top-grade B-schools as Strategic Managers for the purpose.

Strategic planning is the art of creating specific business strategies, implementing them, and evaluating the results of executing the plan, in regard to a company's overall long-term goals or desires. The strategic planning process requires considerable thought and planning on the part of a company's upper-level management. Before settling on a plan of action and then determining how to strategically implement it, executives may consider many possible options. In the end, a company's management will, hopefully, settle on a strategy that is most likely to produce positive results (usually defined as improving the company's bottom line) and that can be executed in a cost-efficient manner with a high likelihood of success, while avoiding undue financial risk.

Now a days, following external risks are generally being faced by the mining sector and mining companies (The list is indicative, not exhaustive)-

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) ISSUES

ESG remains the top risk for mining in recent years. The issue is now firmly integrated within corporate strategies due to its impact on almost every aspect of operations. Although some of

the greatest areas for ESG improvement are not new — improving diversity, equity and inclusion is still a major challenge, and mine closures and rehabilitation require a longer-term, more strategic view.

But ESG is evolving, requiring miners to consider different issues and broaden their capabilities to manage them effectively.

For example, water stewardship and biodiversity are fast becoming urgent priorities amid a changing climate. Stakeholders expect miners to better assess risks and opportunities, and articulate these through transparent, outcome-based measurement and assurance. In fact, more rigorous reporting will become critical if companies are to meet growing stakeholder expectations and avoid accusations of “greenwashing.” Miners that achieve this can get an edge on competitors in many ways, from accessing capital to securing license to operate and attracting talent.

GEOPOLITICS

War among many nations, terrorist attacks and many other geopolitical factors, beyond the control of mining companies, are increasing day by day and these factors are very difficult to mitigate. Forging closer ties with government, increasing collaboration with stakeholders, including trade and sector groups, and exploring the potential of government incentives and co-investments may be the options of risk mitigation.

CLIMATE CHANGE

The whole world is talking about net – net zero situation, which refers to the balance between the amount of greenhouse gas (GHG) that's produced and the amount that's removed from the atmosphere. It can be achieved through a combination of emission reduction and emission removal. Net-zero pathways are set, but achieving ambitions will require a realistic and balanced strategy.

India is talking about ‘**carbon neutral**’ situation, which is used when referring to the ambition to limit any increase in future carbon emissions, while using offsets to neutralise existing emissions. An accelerated decarbonization agenda, and sharper focus on reporting emissions, creates a new urgency around better mitigating climate change risk.

This is a challenge mining companies have become progressively better at managing, but there are still opportunities to improve. For example, not enough miners are taking action to

minimize the physical risks of climate change, such as wildfires and flooding, which may threaten operations.

Companies can explore a mix of options, including carbon offsets, partnering up and down the value chain and collaborating with suppliers and vendors to monitor Scope 3 emissions and can build a proactive strategy to address a risk that is likely to become even more complex.

LICENSE TO OPERATE (LTO)

The process of obtaining LTO is increasingly becoming a complex issue. National & local politics, corruption in some part of bureaucracy, threat from anti-social elements, legal activism, pressure from peer groups, issues of localisation, opposition from local ethnic groups etc are making the process of obtaining LTO very cumbersome.

PRODUCTIVITY AND COSTS

Soaring inflation and talent costs are significantly increasing mining costs, squeezing productivity and delaying expansion plans. But an existing focus on cost management and productivity can pay off. There are empirical evidences that companies which take the help of Cost and Management Accountants (CMAs) and use different tools of Cost and Management Accounting, can effectively control or manage the cost to remain competitive in the business world.

CMAs manage the cost of any business and commercial organisation with an eye on long-term value, as well as short-term gains. Sustainable cost reduction measures include, for example, switching to renewable energy, encouraging innovation to reduce costs in the longer term and creating strategic joint ventures to optimize economies of scale.

SUPPLY CHAIN

Recent disruption creates new urgency to accelerate supply chain transformation. Supply chain disruption is new to the ranking, amid recent pressures, but it's an issue mining and metals companies have long grappled with. Now organizations are intensifying efforts to transform supply chains, to better weather current volatility and find new opportunities to boost efficiency, resiliency and transparency.

Miners are considering more innovative, sophisticated approaches to mitigating supply chain risk, including through stronger relationships with suppliers and collaborative contracting. With the pandemic exposing weaknesses in the "just-in-time" model, we expect to see a mix

of “just-in-case” and “just-in-time” supply strategies as miners find a way to balance supply chain resilience with costs.

WORKFORCE

Building a purposeful brand and a greater focus on re-skilling can help overcome talent shortages. Mining companies usually face their greatest ever talent shortage following a massive wave of retirements and resignations. Replacing these workers and finding talent with critical skills will require a radical rethink of the sector’s approach to attracting, retaining and nurturing talent. With younger workers deterred by mining’s image, companies must double down on efforts to build a purposeful brand that aligns with today’s values.

Usual mining leaders recognize the need to re-skill and upskill workers, but few are embracing this opportunity. A greater focus on training existing workers and sector newcomers in different skills can fill talent gaps and build a more flexible, agile workforce

CAPITAL

Changing demand and investor expectations are shifting capital allocation strategies. Miners are maintaining their focus on capital discipline, but also exploring how to invest in growth and transformation. The energy transition is shifting demand, and companies are responding through more investment in “future-facing” commodities, including copper and lithium, and divesting coal assets.

Such decisions are not only motivated by a desire to adapt to an evolving market, but also to meet investors’ expectations around ESG performance. Organizations’ access to capital is increasingly linked to their ability to show how they create value beyond the bottom line. Cost and Management Accountants (CMAs) can also help here the companies to take holistic decisions.

DIGITAL INNOVATION

Investment in data capabilities will guide better, faster decisions. Digital innovation has dropped down the ranking as miners build confidence and capabilities in this area. Companies are reaping significant cost, productivity and safety gains from the implementation of new technologies, including drones, remote operating centres and autonomous trucks.

But, despite encouraging progress, across the sector we still see a largely siloed approach to digital and innovation. A more integrated strategy across the value chain would increase ROI and help miners better tackle their most complex challenges, including ESG and productivity.

NEW BUSINESS MODELS

Rationalize, grow, transform - miners are exploring potential future strategies to capture value. With demand for certain commodities set to increase and sustainability becoming a bigger focus, now is the time for organizations to rethink business models. We see miners analysing where optimal value can be found, then designing their business models to capture this. Whether companies decide to reshape models to rationalize, grow and transform or consider a strategic blend of all three - those that act now to future-proof their business will best withstand disruption, navigate changing commercial relationships and ultimately win competitive advantage.

RISKS OF UNVIABLE MINING

The viability of mining operations is crucial for financial stability, operational efficiency, and environmental sustainability. Unviable operations can lead to significant financial losses, hinder long term growth, compromise safety standards, and result in wastage of valuable resource.

To tackle and mitigate this risk, following steps may be taken –

- Identify unviable coal mines on the basis of cost-benefit analysis, which is the very essential step and only CMAs (Cost and Management Accountants) are qualified enough to take this exercise.
- Calculate balance mineable reserves.
- Do technical assessments including safety and environmental concerns.
- Make strategies for revival of unviable mines through loss reduction measures by implementing new technology, re-orienting mining method and enhancing safety standards. CMAs are only qualified professionals in our country to do this work efficiently.

COMPETITION RISKS

Competition in the market and emphasis on renewable resources of energy pose a threat to many mining industries. The demand for minerals as a feedstock for synthetic fuel production, such as petrochemicals, coal gasification and coal bed methanol should be emphasised upon.

CYBER SECURITY RISKS

Cyber security risks pose potential threats to the information systems, data, and operations. Mining companies handle sensitive and confidential information related to the operations, employees, customers, and stakeholders. A cyber-attack or breach could lead to significant financial losses, reputational damage, disruption of operations, and compromise critical data. Different cyber security measures must be implemented. A dedicated Cyber Crisis Management Group should be formed and to oversee and coordinate information security practices, senior officials should be designated as the Chief Information Security Officer (CISO). The CISO is responsible for implementing and monitoring information security measures. He can conduct regular security awareness programmes for end-users to enhance their understanding of cyber threats and promote best practices. These programmes include expert talks, email campaigns, and display boards to educate employees about potential risks and ways to mitigate them.

CREDIT RISKS

The credit risks of receivables from customers directly impact the financial health and liquidity of the organisation. Disputed and undisputed receivables from customers can pose challenges in terms of delayed payments, potential write-offs, and cash flow constraints. Companies should prioritise addressing credit risks in order to maintain the cash flow and the overall financial health of the organisation. In cases where commercial disputes cannot be resolved bilaterally, the help of Arbitration. Conciliation etc may be taken.

OPERATIONAL SAFETY RISKS

Operational safety risks may have a potential impact on the well-being of workers and the overall operational efficiency. Failure to comply with safety regulations and implementation of safety measures may lead to unsustainable and irresponsible functioning of the mining industry. To ensure operational safety and generate a safe working environment Site Management Plans (SMP) for each mine may be created. These plans clearly outline the roles and responsibilities of officials involved in mining operations, ensuring accountability and adherence to regulations. The SMPs have been diligently prepared in accordance with the guidelines set by the Directorate General of Mines Safety (DGMS) and have been submitted for review and approval.

EVACUATION RISKS

Efficient evacuation of minerals is crucial for the smooth off-take of production. Limitations or bottlenecks in the evacuation infrastructure, can result in delays, congestion, and increased costs of moving minerals. To address evacuation risks for off-take, rail and road infrastructure is required to strengthen. Usually, without the help of the Government, it is not possible. The irony of fate is that the rail and road projects involve a huge cash outflow and long time to develop. Companies should not leave any stone unturned to convince the Government and Government authorities to improve infrastructure. Joint ventures with state governments and the railways may be additional solutions.

TECHNOLOGY RISKS

Upgrading technology and ensuring optimal utilisation of Heavy Mining Machinery can help in remaining competitive, maximise resource extraction, and meet market demands. Failure to address these risks could result in reduced operational efficiency, increased costs, and lower profitability.

Revision of equipment specifications to incorporate latest technologies such as electrical drive, fuel-efficient engines, and health/productivity monitoring systems is essential. Procurement of high-capacity Machines guaranteed availability of spares and consumables and regular review and early recommissioning of long breakdown are key factors to mitigate this risk. Premature survey of obsolete and irreparable equipment, monitoring and follow-up for survey of/grounding of equipment that has completed its lifecycle etc are also important.

RISKS ASSOCIATED WITH LAW & ORDER

Starting a greenfield project is not an easy task in our country. External factors like, bureaucracy, politics, legal environment, safety and security etc affect the prospects. Moreover, it is also a very difficult task to run a brownfield project in our country due to many issues related with law and order. We have to always keep in our mind that mining is a typical business. Usually in any other industry, the companies are to work hard to obtain the land clearance, pollution clearance, environment clearance etc only once, twice or thrice in their life time to establish manufacturing facilities like factories; but mining companies have to do all these activities again and again i.e. every year because their mines (i.e. factories) have limited mineral reserves & lives and regular exercise has to be taken place to find out and start new mines for sustainability.

COMMUNITY HEALTH RISK

Community health is another major priority. Mining of many minerals, like opencast mining of coal etc create health issues in nearby area. Mines are typically the prime employer – in many cases, the only employer in their region – and have a duty to nurture a healthy community. From a pure business perspective, a local workforce suffering from conditions such as AIDS, tuberculosis, and malaria is also less productive, with the added threat of legal and regulatory action for low standards of healthcare. If mining companies don't address the issue, not only community health risk increases, but it also increases political risks as local politicians may make unnecessary negative hue & cry in national and international media against the company.

CHAPTER 7: INTERNAL RISKS IN MINING SECTOR

Apart from above, the mining companies face many internal risks. These risks may vary from the company to company or from mineral to mineral, but their mitigation is very important. Any lacuna in the mitigation of internal risks make the management responsible and attract the ire of different agencies of the Government. Any failure to mitigate these internal risks may be harmful not only for the property of the mining company but force the companies to face the wrath of politicians and legal courts also.

This chapter deals with those risk with their suggested mitigation plan also.

SAFETY RELATED RISKS

Safety related risks are the core risks of mining sector. A worker in a mine should be able to work under conditions which are adequately safe and healthy. At the same time, the environmental conditions should be such as not to impair his working efficiency. This is possible only when there is adequate safety in mines.

A Safety Management System (SMS) consists of comprehensive sets of policies, procedures and practices designed to ensure that barriers to unwanted incidents are in place, in use and are effective.

SMS minimize adverse effects of the risk, to which the workers are exposed in execution of different activities. Risk management involves the entire staff in the realization of safety improvement programme with responsibility and accountability sharing proportionately with the decision-making authority. System Study and Safety Audit for the purpose of eliminating the Risk of Accidents & Dangerous Occurrences are also undertaken.

The major characteristics of SMS are:

- It is the principal vehicle for day-to-day management of all aspects of safety in the operations.
- Its focus is not only on personnel safety, but also ensuring operational integrity
- It lists a set of performance indicators to monitor the integrity of the safety critical activities being undertaken correctly and according to schedule.

- It outlines an auditing and feedback regime for management control of hazards. It should be recognized that without a formal well-defined SMS, followed by adequate training, implementation and monitoring, major hazards are impossible to manage of a PE system.

Safety Management System (SMS) includes -

- Identify the hazard
- Dissect each activity to as smallest node as possible,
- Assess risk by considering the exposure, probability and consequence
- Prioritise and implement control measures
- Find out the residual risk, if any and procedures for handling of situations
- Continual improvement by adopting new methods and procedures

SIGNIFICANT HAZARDS IN UNDERGROUND MINING

Underground mining of any mineral, specially of coal, is very difficult and is full of risks which needs special discussion. Some significant hazards in underground mining may be summarised as follows -

- Mine gases
- Mine fires and spontaneous heating
- Explosions in the Mine
- Rock burst
- Subsidence
- Inundation
- Roof fall

Mine Gases

Mines gases are common features in many mines, especially in coal mines. The following gases are found in underground coal mines:

- Carbon monoxide (CO)
- Carbon-dioxide (CO₂)
- Methane (CH₄)
- Hydrogen Sulphide (H₂S)
- Sulphur dioxide (SO₂)

The production of these noxious and inflammable gases beyond tolerable limits in underground mines creates environmental hazards. The factors, which are responsible for the production of these noxious and inflammable gases, are as follows:

- Exhalation by man
- Blasting and explosion
- Underground fire
- Spontaneous combustion
- Coal dust explosion
- Decay of timber
- Bacterial action
- Slow oxidation of coal
- Distillation of coal

Mine Fires and Spontaneous Heating

Various factors governing mine fire and spontaneous heating in underground mines are as follows-

- Chemical composition of minerals
- Friability
- Presence of Iron Pyrite
- Nature of adjoining strata
- Depth of the seam
- Thickness of the seam
- Geological disturbances

Explosives and Shot firing

The main danger from explosives in underground mine is the ignition of firedamp. It may take place in the following ways:

- By incompletely detonated explosive: Such explosive may continue, to burn like an ordinary combustible material.
- By incandescent particles coming out of the shot hole after blasting and contact with coal dust or gas.
- By the flame and hot gases.

- By the compression wave of the blast, this may compress the gases in the cracks connected with the shot hole and raise the temperature of the compressed gas to such an extent as to ignite it.

An explosion is a sudden process of combustion of great intensity accompanied by spontaneous release of large amount of heat energy and in which the original gas or solid substance like coal dust in case of coal mining is instantaneously converted into gaseous products. An explosion is invariably accompanied by violence on a large scale.

Firedamp has been the cause of explosion in mines, especially coal mines due to moisture in dangerous proportion with the result that in every mine adequate step is taken to prevent a firedamp explosion. Possible causes of explosion can be attributed to the following factors -

- (1) Flames naked lights, damaged flame safety lamps and contrabands.
- (2) Heated surface – overheated lamp gauges, electrically heated wires, heated rock surface, incandescent coal, overheated broken blocks, un-lubricated haulage rollers, rope friction, conveyor troughs rubbing against its support,
- (3) Sparks – Electric sparks and arcs, static sparks from compressed air pipes, friction sparks from iron pyrites, friction spark from light metal alloys, and
- (4) Explosives – Resulting into flame and hot gases, compressive wave set up by explosives, especially in a break adjacent to the shot hole, incandescent particles ejecting from the shot hole, incompletely detonated explosives, etc.

Rock Burst

A rock burst or bump in a mine is a sudden and violent failure or collapse of the rock in situ under stresses greater than it can normally withstand and on a scale sufficient to cause material damage to endanger the safety of the workers.

Subsidence

Subsidence is an important aspect of underground mining activity. Underground mining operations can give rise to undesirable effect, such as –

- (1) Damage to surface installations like buildings, railways, roads, pipelines for water supply, power line, etc.,

- (2) Produce fractures in another coal seam, immediately above the one being currently exploited,
- (3) Cause fractures, on the surface, which may in turn cause flooding of the underground working by drawing water from the sources on the surface.
- (4) Cause damage to other mining installations as well as affect roots of the vegetation.

Inundation

An inundation is an eruption of water or other liquid matter or any wet material that likely to follow from workings of the same mine or of an adjoining mine. Many accidents and loss of lives have been recorded in many countries, including India due to inundation.

Health Hazards

Occupational safety and health are very closely related to productivity and good employer – employee relationship.

Some of the measures, proposed for occupational safety and health from time to time, have been listed below –

- Effective dust removal system in the crusher house
- Provision of wet drilling
- Provision of rest shelters for mine workers with amenities like drinking water, fans, toilets etc.
- Provision of personal protection devices to the workers.
- Rotation of workers, if necessary, exposed to noise to reduce exposure time
- Closed control room in crusher house with proper ventilation.
- Dust suppression of haul road and dumps.
- First - Aid facilities in the mining area.
- Provision of communication network between pit working areas and the manager.
- Provision of alarm system at working areas.

- Training of personnel including contract workmen in Mines Vocational Training Centres to inculcate safety consciousness through modules, video clippings, slogans and posters and introduction of safety awards.
- Safe design of height, width and slope of working benches of OB & coal, overall pit slope kept less than 33°.
- Safe design for formation of overburden, over all dump slopes kept at 26 degrees.
- Safe design of haul roads.
- Provision of firefighting equipment.
- Safe storage of explosives and other inflammable substances.
- Regular / periodical monitoring of mine environment to ensure the efficacy of various protective measures.
- Initial and Periodical medical examination for the employees.

Storage, Handling and Disposal of Hazardous Waste

Hazardous waste generated such as used oil, waste oil, empty oil drums, batteries, nonferrous scrap etc. Explosives, HSD oil, Hydraulic oils should be handled, stored, disposed, transported as per Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and CPCB guidelines, like-

- The waste generated shall be disposed as per HWM rules within 90 days from date of generation to authorized recycler.
- The handling, transport and storage of explosives shall be as per Indian Explosive Act.
- Transportation and storage of explosive shall be as per the approved code of practice.
- Flammable, ignitable, reactive and non-compatible wastes shall be stored separately and never stored in the same storage shed.
- Adequate storage capacity (i.e. 50 % of the annual capacity of the hazardous waste incinerator) shall be provided in the premises.
- Storage area shall be provided with the flameproof electrical fittings and strictly adhered to.

- Adequate firefighting systems shall be provided for the storage area, along with the areas in the facility.
- There should be at least 15-meter distance between the storage sheds.
- Loading and unloading of wastes in storage sheds shall only be done under the supervision of the well trained and experienced staff.
- Fire break of at least 4 meters between two blocks of stacked drums shall be provided in the storage shed. One block of drum should not exceed 300 MT of waste.
- Minimum of 1-meter clear space shall be left between two adjacent rows of pallets in pair for inspection.
- The storage and handling shall have at least two routes to escape in the event of any fire in the area.
- In order to have appropriate measures to prevent percolation of spills, leaks etc. to the soil and ground water, the storage area should be provided with concrete floor.
- Measures shall be taken to prevent entry of runoff into the storage area. The storage area shall be designed in such a way that the floor level is at least 150 mm above the maximum flood level.
- The storage area floor should be provided with secondary containment such as proper slopes as well as collection pit so as to collect leakages / spills etc.
- All the storage yards should be provided with proper peripheral drainage system connected with the sump so as to collect any accidental spills in roads or within the storage yards as well as accidental flow due to firefighting.
- The stacking of drums in the storage area should be restricted to three heights on pallets (wooden frames). Necessary precautionary measures should be taken so as to avoid stack collapse. However, for waste having flash point less than 65.5°C, the drums shall not be stacked more than one height.
- Drums containing wastes stored in the storage area shall be labelled properly indicating mainly type, characteristics, source and date of storing etc.

- The storage areas shall be inspected daily for detecting any signs of leaks or deterioration if any. Leaking or deteriorated containers should be removed and ensured that such contents are transferred to a sound container.
- In case of spills / leaks / dry adsorbents / cotton should be used for cleaning instead of water.
- Proper slope with collection pits shall be provided in the storage area so as to collect the spills / leakages.
- Proper records with type of waste received, characteristics as well as the location of the wastes that have been stored in the facility need to be maintained.

MANPOWER RELATED RISKS

Mining is a specialised job. Key manpower issues faced are rising labour costs, manpower rules and regulations, as well as attracting and retaining younger workers.

Mining is a risky business also. Moreover, mining activities are undertaken in remote areas where basic facilities, like proper residence, shopping, schooling, entertainment etc, are not available. Therefore, it always remains a challenge for mining companies to retain their manpower remote places. Given an opportunity, the quality manpower does not hesitate in switching the jobs. Retaining quality manpower, providing them all basic amenities and keep them motivated is tough job and therefore labour turnover is very high.

In their quest to extract ever-larger volumes, many mining companies have put enormous pressure on their capital equipment and geological assets, which have consequently experienced excessive wear and tear. This 'sweating of assets' means that mining equipment (drills, dozers, motor-graders, dumper trucks, shovels, excavators, water sprinklers, mobile cranes, mobile light towers, explosive vans, mobile crushers and weighbridges) needs constant repair and maintenance to remain productive and avoid accidents. High-level, engineering skills are required to keep this equipment running, yet the demand for such resources coincides with the departure through retirement of an ageing workforce. The newer, younger recruits do not possess sufficient understanding, experience or judgment to bring assets back into use quickly, or to predict future technical problems. This leaves mines with a significant knowledge gap that could impair its ability to achieve planned output quotas. The traditional, production-driven culture has also reduced the influence of the technical services function

responsible for getting the most out of geology and capital equipment. In some cases, technical services are actually part of the wider production team, and therefore, lack an independent perspective to challenge decisions at the executive committee level. In such an environment, where output is everything, the longer-term management of assets takes second place, which could make the mine vulnerable to shutdowns, failures and safety incidents.

This manpower related risk results in increased cost of production.

FINANCING RELATED RISKS

Financial risks, that mining companies are exposed to –

- Financing risks
- Commodity price risk
- Currency risk

Financing risks

The ability to raise finance and decisions around how that new or additional finance should be structured is critical to the success of any mining project. Funding is needed not only to construct the mine and build up the associated infrastructure; but also to undertake the agreed exploration and development work programmes.

Depending on the risk profile of the mining company and prevailing economic or market conditions the financing needed may not be available to the company on sensible commercial terms.

For example, in order to bring in new investors, additional equity financing may only be available at a lower price than the current share price. This means that the ownership stake of existing shareholders in the company will be diluted and reduce the overall value of their investment.

Debt financing brings its own risks: these include restrictive covenants being imposed on the company by the lender which could impact operating activities. Or the funds may only be released once certain (possibly onerous), conditions are satisfied.

In the event that the company is unable to raise additional finance, the scope of its operational activity may be reduced and production could slow or stop. This could potentially result in its interest in the licence or project being diluted and even terminated.

Consequently, the company may be unable to deliver the exploration and development programme within the timescale set out in the business case. Ultimately, the lack of suitable financing options will drive down the share price of the company.

Commodity price risk

Significant changes in the market prices for commodities will have an impact on the cash flows generated by a mine. This is arguably the single biggest factor affecting the profitability of mining companies.

Market prices for commodities are sensitive to changes in a range of political, environmental and macro-economic factors. Any of these can impact the supply and demand of the resource and as a consequence can lead to substantial price fluctuations.

For example, changes in demand caused by changes in fashion can impact the use of gold, silver or platinum in jewellery. Strategic decisions by central banks to increase or decrease their holdings in gold reserves can also impact the price of gold and other precious metals.

War or adverse weather can cause disruption to supply chains; technological innovation in the motor industry, particularly demand for electric cars, means an increase in the need for lithium used in the batteries that power those cars. All of these factors can lead to unexpected movements in commodity prices.

Where the market price of a commodity falls below the expected cost of production over an extended period of time, then the production company will need to consider suspending (or abandoning) its mining operations.

Alternatively, it will be required to issue further cash calls on investors to sustain ongoing losses. Either way, the effect on the company's share price could be quite detrimental.

Currency risk

Currency fluctuations can affect the financial performance of any company but particularly mining companies where revenue is derived from commodity sales; as many commodities are denominated or priced in US dollars (gold in particular) and an increase in the value of the US dollar can lead to a fall in demand of the associated commodity.

MANAGEMENT OF THE INTERNAL RISKS

Management of the mining companies are supposed to take concrete measure on regular basis to check the internal risks. Some of the measures, for the example, may be summarised as follows -

Measures to be taken to avoid the mine gases

- The quantity of inflammable gas given out in each ventilation district is determined at least once in a month and similarly borehole samples once in a quarter.
- The quantity of air sent into each district is such as to keep the percentage of inflammable gases in the district return airway below a percentage of 0.75 to 1.25 at any place in the mine.
- Flameproof apparatus has to be installed at each and every working face to monitor the weather in the area of development or depillaring in each and every discontinued gallery as also in all other places, where the percentage of CH₄ in the general body exceeds 0.2%.
- Flame safety lamps; air sampling and analysis should continuously monitor the state of atmosphere near the stopping.
- There is strict adherence to latest safety manuals and statutory acts.
- A suitable mechanical ventilator installed on the surface should ventilate working.
- Approved types of stone dust barriers are provided at the specified places.
- A ventilation officer in each and every operative area should assist the Manager.
- Adequate quantity of air is coursed to well within meters of the working face,
- Air samples are frequently collected of the roof of the working face and analysed timely for the presence of CH₄.

Measures against mine fires / spontaneous heating

- Adequate size coal pillars are being maintained in trunk roads.
- Panels are planned to extract within the incubation period.
- Continuous monitoring of CH₄, CO₂, CO at goaf edge and other strategic points.

- Flushing of Nitrogen / CO₂ in the goaf, if needed.
- Filling of subsidence cracks on the surface by soil etc.

Measures against Fire damp explosion

- For avoiding dangerous accumulation of firedamp, it will be ensured to keep it below its lower limit of explosibility.
- Avoiding sources of ignition, which may cause the firedamp to explode.
- Proper ventilation of the mine is the main to prevent dangerous build-up of firedamp.
- Besides this, regular inspection of places where firedamp may accumulate is very essential in addition to making provision of proper ventilation.
- The motors, switch gears and transformers will be provided with flameproof enclosures.

Measures against coal dust explosion in the coal mining

- Reducing the formation of coal dust in the working faces, haulage roads etc. - Preventing its spread.
- Rendering the coal dust harmless by wetting it with water or mixing the same with inert stone dust.
- Making provision of stone dust barriers or water barriers.
- Water spraying at loading points, transfer points as also over the loaded coal tubs help in reducing the dissemination of coal dust. Dust at the transfer points is being collected with use of dust extractor.

In addition, by providing proper ventilation system, especially in underground mines, risks that may arise due to mine gases, fires, explosions may be minimised. The working environment in underground mines is one of the important aspects associated with mining operations. Every mine ventilation system will be planned, established and maintained for creating safe and comfortable environment in mine workings for all work persons during all stages of mining operations. Ventilation system of a mine is required to satisfy the following basic needs in addition to comply the statutory requirements -

- To ensure at least 19% of O₂ and below 0.5% of CO₂ in the air circulated at the workplace.

- To dilute noxious and inflammable gases so as to render it harmless.
- To remove or dissipate the coal or rock dust produced in the mine.
- To prevent excessive rise of temperature and humidity.
- In addition to the basic requirements, ventilation system of every underground mine is designed and planned by considering the following important parameters for an optimum and efficient ventilation system:
 - Circulating sufficient quantity of fresh air to all mine workings including Plant & Machinery.
 - Air power requirements of the mine should be as minimum as possible.
 - System should have Optimum Energy Efficiency.

For extraction of minerals by underground operations, entries to the coal seams will be made from surface in the form of Tunnels and Shafts. Ventilation system is established through these entries by continuously circulating fresh air through some of the entries called as downcast and taken to surface through other entries called upcast. This intake air is circulated through all the required workplaces to take care of the basic requirements for maintaining safe and comfortable working environment.

This system is established by operating a Fan called Main Mechanical Ventilator installed at surface over one (or multiple) of the entries and operated continuously as long as the mine is in operation. Capacity of the said fan in respect of air flow rate, pressure and power are pre-determined as per the ventilation requirements at various stages of mining activity and installed accordingly.

For mines having deep workings with heavy mechanisation and in needy mines, Air cooling systems are also being installed for improving the comfort at workplaces. Consultancy services and guidance is also taken from reputed scientific institutions of India and abroad for the mines in introduction of advanced systems in respect of underground mining environment. Various modelling software is being procured and used for different applications related to mine ventilation and underground environment.

Other Protection Measures

- Float alarm system should be provided and maintained in proper working order.

- River guards may be engaged for monitoring of water level of adjoining rivers during monsoon period, in three shifts.
- River Guards should be provided with cell phone to know the water levels and to inform the mine authorities.
- Mock rehearsals may be conducted periodically and record is being maintained at the mine.
- Escape routes must be displayed in underground at conspicuous places and duty card is issued to all concerned for easy withdrawal of persons from underground, in case of emergency.

Precautions at the surface of mines

- All entries should be planned above the HFL zone to avoid danger of inundation.
- Filling up of the subsidence cracks, if any, with overburden or any other material is being practiced.

Underground Precautions

- The galleries in the panels may be designed, rising towards the boundary of property so as to have self-drainage of water.
- The panels may be planned to be extracted from boundary of mine, this ensures the water would flow through drains into the sump and avoiding the risk of water to other panels. Adequate capacity of main sump and auxiliary sumps with pumps has been provided.

EMERGENCY PLAN

Manager must plan of action for use in case of fire, explosion or other emergency occurs. The plan should outline the duties and responsibilities of each mine official and key men including telephone operators. All officials and key men should be thoroughly instructed in their duties to avoid contradictory orders and confusion. The emergency plan may provide for mock rehearsals at regular intervals.

DISASTER MANAGEMENT PLAN

Disaster Management Plan (DMP) is a general plan of action for use in the event of inundation, fire, high wall failure, dump failure or any other dangerous occurrence or in the time of emergency. The DMP will have three stages: -

1. Information Stage
2. Assessment Stage
3. Action Stage

SUPPORTING COMMITTEES

Management should form some supporting committees which will assist the mining officials of the company during emergency. Some of the important committees may be - Public Relations Committee

1. Catering Committee
2. Medical Committee
3. Men Management Committee
4. Material Management Committee
5. Transport Committee
6. Survey Committee
7. Casualty Committee
8. Security Committee
9. Cash Committee
10. Accommodation Committee

OCCUPATIONAL HEALTH AND SAFETY

Occupational health needs attention both during construction & erection and operation & maintenance phases. However, the problem varies both in magnitude and variety in the above phases. The occupational health problems envisaged at this stage can mainly be due to constructional accident and noise.

The problem of occupational health, in the operation and maintenance phase is due to Respirable dust and noise. With suitable engineering controls the exposures can be reduced to less than TLV limits and proper personnel protective devices should be given to employees.

The working personnel should be given the following appropriate personnel protective devices, like -

- Crash Helmets
- Zero power goggles with cut type filters on both sides and blue colour glasses
- Chemical goggles
- Welders' protective equipment for eye & face protection

- Cylindrical type earplug
- Earmuffs
- Dust masks
- Canister Gas mask
- Self-contained breathing apparatus
- Leather apron
- Aluminized fibre glass fix proximity suit with hood and gloves
- Leather hand gloves
- Asbestos hand gloves
- Acid/Alkali proof rubberized hand gloves
- Canvas cum leather hand gloves with leather palm
- Electrically tested electrical resistance hand gloves
- Industrial safety shoes with steel toe
- Rubber boots (alkali resistant)
- Electrical safety shoes without steel toe and gum boots

Full-fledged hospital facilities should be made available round the clock for attending emergency arising out of accidents, if any.

All the working personnel shall be medically examined as per Statute i.e. Mines Rules, and related circulars.

GENERAL PRECAUTIONS TO BE TAKEN

Based on the Risk Management process, the recommended controls and precautions to be taken at the mine for the identified hazards to prevent accidents may be as follows:

- To allocate sufficient resources to maintain safe and healthy conditions at work;
- To take steps to ensure that all known safety factors are taken into account in the design, construction, operation and maintenance of plants, machinery and equipment;
- To ensure that adequate safety instructions are given to all employees;
- To provide wherever necessary protective equipment, safety appliances and clothing, and to ensure their proper use;
- To inform employees about materials, equipment or processes used in their work which are known to be potentially hazardous to health or safety;

- To keep all operations and methods of work under regular review for making necessary changes from the point of view of safety in the light of experience and up to date knowledge;
- To provide appropriate facilities for first aid and prompt treatment of injuries and illness at work;
- To provide appropriate instructions, training, refresher programmes and supervision to employees in health and safety, first aid and to ensure that adequate publicity is given to these matters;
- To ensure proper implementation of fire prevention methods and an appropriate firefighting service together with training facilities for personnel involved in this service.
- Ensure fire pumps in operating conditions and instructs pump house operator to ready for any emergency with standby arrangement, like to guides the firefighting crew i.e. firemen, trained plant personnel and security staff, to organizes shifting the firefighting facilities to the emergency site, if required and to directs the security staff to the incident site to take part in the emergency operations under his guidance and supervision.
- Emergency Coordinator-Medical, Mutual Aid should be there so that in the event of failure of electric supply and thereby internal telephones, sets up communication point and establishes contact with the Emergency Control Centre (ECC), to organizes medical treatment to the injured and if necessary, will shift the injured to nearby hospitals and to make sure that all safety equipment's are made available to the emergency team.
- Locations of assembly points, depending upon the plant layout and location would be identified wherein employees who are not directly connected with the disaster management would be assembled for safety and rescue. Emergency breathing apparatus, first aid and minimum facilities like water etc. would be organized.
- Plant facilities would be connected to Diesel Generator and would be placed in auto mode. Thus, water pumps, plants lighting and emergency control centre, administrative building and other auxiliary services need to be connected to

emergency power supply. In all the blocks flame proof type emergency lamps would be provided.

- First Aid, Firefighting equipment's suitable for emergency should be maintained in coal storage and reject area. This would be as per statutory requirements as per TAC Regulations. However, fire hydrant line covering major areas would be laid. Fire alarms would be located in the bulk storage areas.
- An ambulance with driver shall be available in all the shifts. Emergency shift vehicle would be ensured and maintained to transport the injured or affected persons. A Number of persons would be trained in first aid so that, in every shift first aid personnel would be available.
- At the end of an emergency, after discussing with Incident Controllers and Emergency Co-ordinators, the Incident Controller orders an all-clear signal. When it becomes essential, the Incident Controller communicates to the District Emergency Authority, Police, and Fire Service personnel regarding help required or development of the situation into an Off-Site Emergency.

It may be mentioned here that all above mentioned are indicative, not exhaustive. Each Mining Company is required to identify its own risks and make a plan to mitigate them. Internal Auditor will ensure that risk mitigation plan is working, and deviation will be reported to the higher management.

MITIGATION OF FINANCIAL RISKS

An effective project management controls framework enables frequent monitoring of the main risk indicators – in particular, delays and cost overruns – and spots any unfavourable trends early enough to respond. Periodic project reviews can assess that staff are complying with policies and procedures and ensure that suppliers are adhering to the contract terms. This should create a flow of reliable information to the individuals and committees that oversee the project, with five principal areas of focus:

- 1 **Strategy, organization and administration** - Projects should have a clear strategy, with a formal approval process prior to entering into contracts and committing company funds. Policies and procedures for all associated processes need to be regularly reviewed and updated, with the right people put in place, with defined roles and responsibilities.

- 2 **Cost management** - A standard budgeting process ensures that all expenditures are subject to a consistent level of scrutiny, and makes it easier to monitor spending. Similarly, formalized reviews of payments and approvals help to control costs throughout the project, with all authorizations documented. Taking help of a Cost and Management Accountant may be extremely fruitful to the business.
- 3 **Procurement management** - A single, organization-wide sourcing process fosters strong business relationships with reputable firms and encourages a reputation for fairness. Contracts can be open to radically differing interpretations, and a standard contract template – created with the help of legal specialists – avoids ambiguity, with common, clear language.
- 4 **Project controls** - Mining projects change constantly, and owners need a formal, documented process for agreeing and approving any variations. A robust risk management framework does not just consider immediate project risks, but also encompasses wider business, regulatory and political risks, such as resource nationalism or environmental opposition. Many mining companies have multiple regions and business units and need to aggregate all the various risks to gain a top-level view.
- 5 **Schedule management** - By agreeing on schedule development standards, project managers can take a broad view of every major activity, compare the progress of different projects, and make informed decisions on schedule changes caused by factors such as weather, materials delivery, staff availability and budget limitations. Despite the best efforts, problems can occur, so organizations should be prepared to take urgent action, including more frequent status reporting, closer observation of contractors in the field and a detailed study of supplier performance against contract. When contemplating any remedies, it is wise to seek legal advice. Ultimately, controls are only as good as the people that use them, and every effort should be made to establish a risk-aware culture, with risk performance integrated into appraisals and incentives.

MANAGEMENT OF SKILLED MANPOWER RELATED RISKS

By placing a higher priority on skilled manpower, mining company Boards can help shift the culture from pure volume to longer-term value. An independent, executive-level technical services committee could aid this process, giving technical personnel a bigger voice with senior management, as a counterpoint to the production agenda. Learning and knowledge transfer should be an integral part of resource planning, so that essential skills are not lost to the organization when individuals leave or retire. All appropriate staff should receive training

in technical and diagnostic problem-solving, while retiring workers could be incentivized to remain on a part-time basis or be employed as advisors. Geological complexity is one of the biggest challenges facing the industry, and requires a joint effort by management, workers and unions to agree on the necessary technical, information technology (IT) and telecommunications infrastructure, as well as training and health and safety measures. The technical services, Human Resources (HR), health and safety and production functions have to coordinate closely, to ensure that the organization can maintain agreed output levels without sacrificing safety or overstressing the capacity of equipment or individuals.

CHAPTER 8: QUESTIONNAIRE

PREPARATION OF QUESTIONNAIRE

Internal Auditor has to first understand the risks of a mining company. Since he / she (Internal Auditor) may not be an expert of mining industry, he / she has to prepare a questionnaire to understand the nitty gritty of the risk management process of the company. Answer of these questionnaire is to be obtained from the management of the company / unit at the time of the audit.

After obtaining the answers of these questions, the Internal Auditor will verify its genuineness and then will make necessary comments for improvement. It is to be kept in the mind that since internal auditor may be an outsider, the answers of these questions is very crucial for further audit and ultimately for the final audit report.

Many Companies discuss about their risk management in its annual report. The Auditor should obtain one copy of that report also. Answers of many questions may be available from that report itself.

A list of probable questions of the questionnaire have been given below. This list is indicative, not exhaustive and Auditors can add / reduce the questions to understand the system -

1. What internal and external risks have been identified by the management in relation to auditee company? Please explain with some brief.
 - a.
 - b.
 - c.
 - d.(May be added more points)
2. Please submit previous internal audit report on the risk management of the company.
3. Does the company any Manual or discussion paper sort of thing on risk management? If yes, provide a copy.

4. Does the company / unit have a Risk Management Framework? If yes, explain it in brief.

5. Does the company / unit have a Risk Management Team (RMT)? If yes, explain in brief with names of the members with contact number and email ids, including that of Chief Risk Officer.

6. Does the meeting of RMT take place regularly? If yes, give the dates and issues discussed during the last three meetings.

7. Please enclosed or discuss Action taken Report (ATR) on the issues discussed in the last three meetings of RMT.

8. Has RMT presented any report to the higher management / Board of Directors (BOD) recently? If yes, explain the brief of the last report with the dates of the submission of the report. If possible, provide a copy.

9. What is the communication system to explain the Risks and Risk Mitigation System to the middle and lower-level management of the company? Explain in brief.

10. Please comment on the “Risk Management Culture” of the organisation.

11. Is company guided by any statutory risk mitigation plan, like mines act etc. If yes, give the details with steps taken –

- (i) _____
- (ii) _____
- (iii) _____

(More points may be added)

12. Please give the details of the programmes organised to communicate the Risk Management Framework to the each and every level of the hierarchy -

- (i) _____
- (ii) _____
- (iii) _____

(More points may be added)

13. Details of literature distributed among all levels of the management and workers to make them aware of the Risk Management Framework. Samples of literature may be attached.

-
-
14. Has the Risk Management Framework has been discussed in detail in the Annual Report of the Company? If yes, copy of the report may be enclosed.
15. Has company suffered any financial, commercial or human loss due to Risks in past ten years? If yes, the details may be provided in separate sheets.
16. Who is accountable to the Boards for quality, risk and assurance disclosures.
-
17. Who is aligning strategy with regulatory requirements and obligations.
-
-
18. Provide a brief as separate sheet(s) on Managing stakeholder relationships and meeting multiple demands.
19. Are Project teams have sufficient and appropriate skills and expertise to manage the project?
20. Are Project risks are fully understood or vetted prior to project approval?
21. Comment on the Project delays during planning and approval result in compressed schedule milestones and unrealistic completion targets set by management.
22. Is there any Major business interruption or inefficiency, due to ineffective asset management? Provide the details.
23. Comment on Escalating cost of resources of major projects in separate sheet(s).
24. Comment on lack of key Labor-skill and industrial relations.
25. Comment on impact of Evolving environmental laws and regulations.
26. Comment on relationships with regulators.
27. Comment on increasingly complex regulatory environment.

28. Provide the status of health and safety of employees, especially those who are engaged in mining activities.
29. Provide the figures of last three years of fraudulent financial reporting, payment fraud, bribery and corruption, theft, anti-competitive behaviour, Market rigging etc
30. Is there any system of hedging against potential royalty rate rises.
31. Steps taken to avoid disputes over transfer pricing.
32. Do Board sub-committees monitor risk and assurance activities effectively?
33. Is management safeguarding the key drivers of value?
34. Is risk and assurance simplified – and aligned with the way the business operates?
35. Is assurance coverage optimal and cost efficient and directed where the business needs it most?
36. Explain the HR policy of the company. What is the labour turnover ratio of the company and its cost of last three years? Has it been compared with similar types of the companies?
37. A brief is required on the financing and financial resources of the company.
38. Is company covered under the mandatory maintenance of cost records and cost audit? If yes, was it complied?
39. What are the major observation of lead Financial Auditors, Cost Auditors and Secretarial Auditors of the company during the period of last three years?
40. Brief of any other point which management desires to share with the Internal Auditor.

CHAPTER 9: INTERNAL AUDIT CHARTER

INTERNAL AUDIT CHARTER

A formal, documented, and approved charter should be prepared and put in place considering it is a foundational element of internal audit activity.

The purpose, authority, and responsibility of internal activity must be defined in the charter. The Internal Auditor (Head of Internal Audit) must review the charter periodically and present it to the senior management and the Board Committee for approval. In case of CPSEs, the charter should be also aligned with any requirements laid out by the Department of Public Enterprise (DPE).

It should,

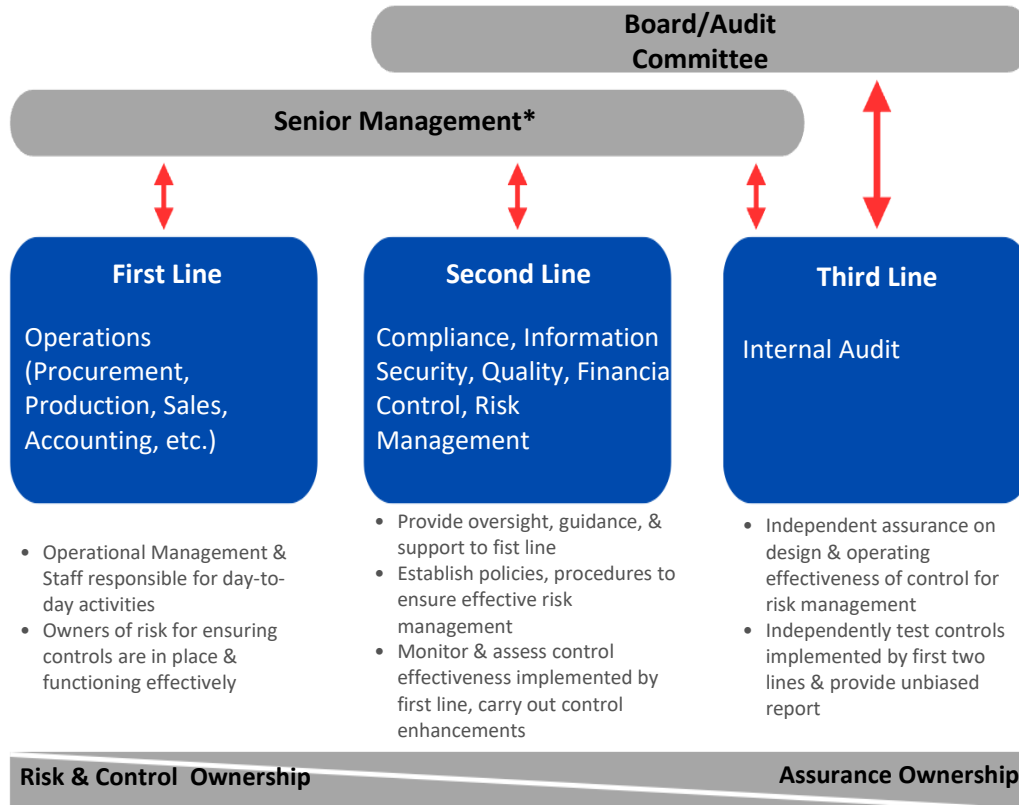
- Establish and define the position and its status within the organization so as to improve the chances of contributing effectively to achieve the organization's objectives.
- Establish a functional reporting relationship with the Board.
- Empower the function with unlimited access to records, personnel, and equipment relevant to performing the engagements.
- Define the scope of internal audit activities that should cover every part of the organization's operations and functions.

STRUCTURE: THREE LINES MODEL

The organization should adopt the model (presented below) so as to facilitate and identify the distinct responsibilities of the Board, Management, and Internal Audit to best achieve the organization's objectives.

Internal Audit, in its third-line role, will provide independent and objective assurance and advice on all matters or responsibilities assigned. Internal Audits may coordinate with the activities of the second line but should not be performing or making management decisions

around the role of the second line. The Internal Auditor will ensure that the charter is aligned with the model.



* A committee comprising of senior personnel representing Finance, Operations, IT, HR, and Legal/Compliance is recommended.

The roles and responsibilities of each line should be established, documented, understood, and communicated across all levels of the organization to ensure alignment.

DELIVERY

Considering that the scope of Internal Audit today extends beyond the financial audit and requires skillsets beyond financial discipline, the delivery model chosen must have multi-disciplinary skills and should be aligned to the audit plan so as to meet the audit objectives.

There are several types of internal audit. For example, Financial Audit; Operational Audit; Information Systems Audit; Environmental Audit, Compliance Audit, etc.

Three options are provided for the delivery of the internal audit services. The Board and Management, after carefully assessing the needs of the organization, should decide on the model that will serve the purpose of the organization. The indicative factors that may be considered for evaluation are Budget, Resource availability, Maturity, Operating environment, and Competency.

- **In-House:** Establishing and resourcing in-house function within the organization.
- **Co-sourcing:** Establishing in-house function and supplementing it with internal audit services if there is a need for specialized or additional resources.
- **Outsourcing:** Contracting the internal audit activity to an external service provider. The service provider must be accountable to senior management personnel in the organization having adequate knowledge of the subject.

Individuals transferred from other functions to carry out internal audits should refrain from auditing the areas for which the individual was previously responsible.

REPORTING RELATIONSHIP

The reporting must be to an appropriate level within the organization for the Internal Audit to fulfil its responsibilities.

Functionally, Internal Audit should be reporting to the Board/Board Committee. In the absence of a Board/Board Committee, the reporting should be to the head of the organization.

Administratively, the reporting should be to senior management personnel (maybe to the Director of Finance/ General Manager of Finance).

The primary responsibility and accountability for the internal audit activities, including that of the external service providers, shall rest with the head of the internal audit function.

Internal Auditors must conform to the Board/Board Committee about the independence of the function, at least, annually.

RESOURCING

The function should have people from diverse backgrounds and with different levels of experience. The function should also consider the budget allocated for the function.

The function should collectively possess the knowledge, skill, and other competencies to fulfill its responsibilities and range of services that are approved for delivery.

The function should consult the Board/Board Committee and senior management about the adequacy of the resources for rendering the services.

(Recommended that a co-sourced model be put in place. In-house team may comprise of a Chief Internal Auditor having around 10 to 12 years of experience supported by two junior resources having 2 to 4 years of experience. Preferably, from financial background with knowledge in IT systems)

INVESTMENT (COST)

Internal Audit has to be cost-efficient but that should not be the “end-all, be-all” when it comes to good governance.

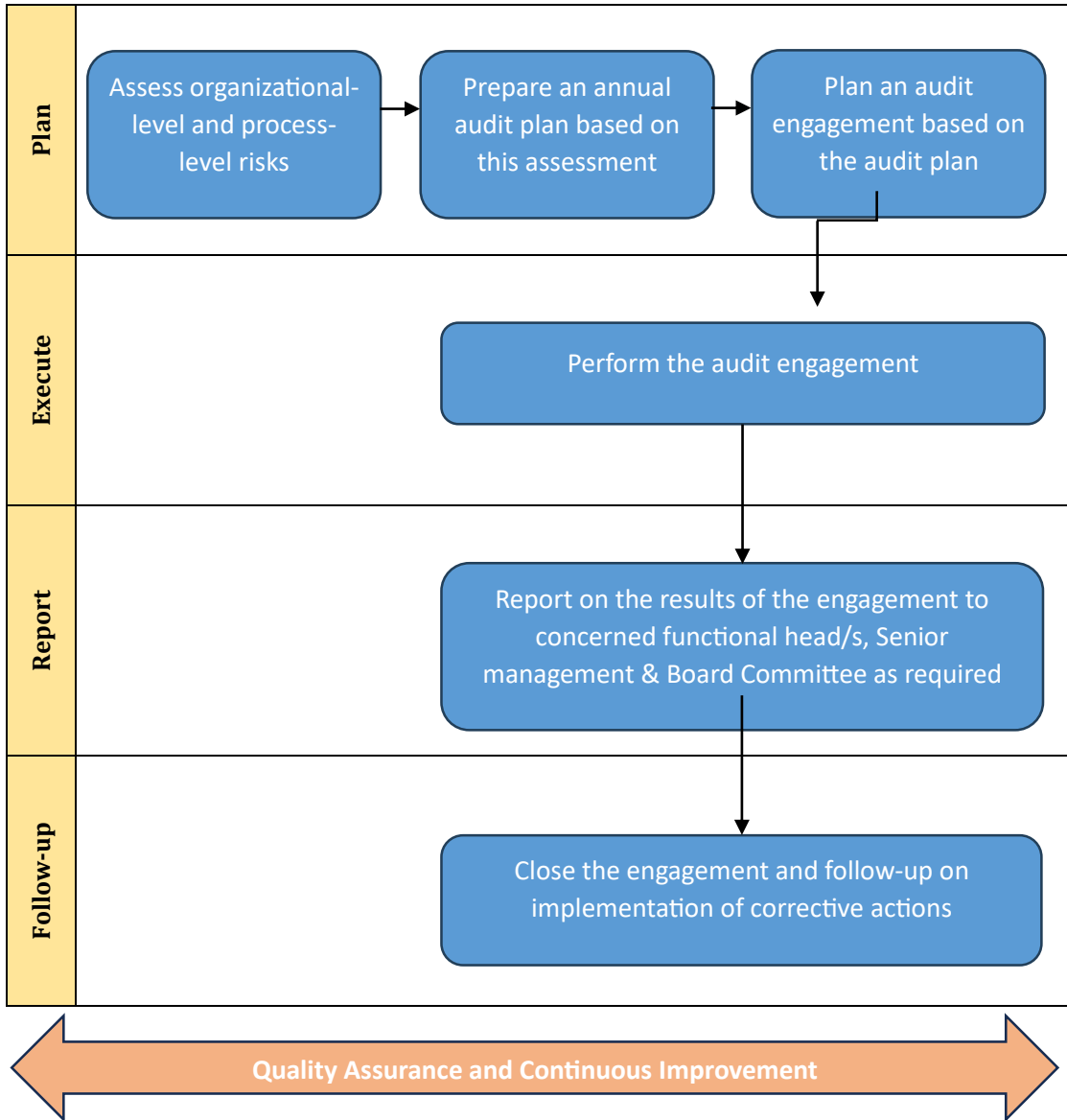
Nevertheless, with the increasing complexity of the function and the digital capability required to generate value, the organization should think and recalibrate its existing approach.

The organization should not dither to invest in building the requisite capability. An objective evaluation of the budget requirement, every year, should form the basis for addressing the need.

CHAPTER 10: INTERNAL AUDIT PROCESS

OVERVIEW OF INTERNAL AUDIT PROCESS

A diagrammatic representation of the overall process has been depicted below for visualization of the internal audit activity.



STEPS OF INTERNAL AUDIT PROCESS

General Steps of the internal audit process has been discussed in Chapter-1 of this Manual. Based on that, the internal audit with take following steps during the audit work (*This list is indicative, not exhaustive*).

Step 1: Planning

The Internal Auditor (IA), after receiving the audit order, will plan the whole audit process. This will include the following -

- IA should go through the Annual Report of the company to understand the internal / external risks of the concerned company and/or the units.
- IA will make a plan and programme to visit the sight.
- IA programme will be conveyed to the Auditee for receiving the confirmation and making all arrangements for the visit like accommodation, conveyance etc.
- The auditor will review such audits of prior period, if any and related professional literature.

Step 2: Opening Meeting

- The Internal Auditor will visit the sight / office and will have opening meeting with the auditee.
- In this meeting, the auditor will also give the Questionnaire, as mentioned in Chapter 7 with a request to submit it back with the answers within next 15 days.
- All officials, related with risk assessment and mitigation in the company / unit will also be invited in the meeting.

Step 3: Fieldwork

After this the IA will start the field- work of Audit with his team –

- He will visit the site and try to understand the internal and external risks.
- He will try to understand the risk mitigation plan of the company
- The replies of the questionnaire by the management will be compared with the actual ground reality and deviation will be noted down.
- IA will talk to workers and other officials, working at the site to know their understanding about the risks.
- Test checking of the internal risk mitigation plan may be done.

- For external risk assessment and mitigation, the IA will talk to all concerned senior officials to understand their preparations and steps taken.
- Special meeting will be arranged between Internal Auditor and Chief Risk Officer (CRO) along with other members of the Risk Management Committee (RMC) to assess the Risk Management Framework
- Related portion of the minutes of meeting of BOD / Risk Management Committee should be shared with the Internal Auditor. It is the duty of the management.
- Action Taken Report (ATR) on the decisions of the management on risks and mitigation.
- IA will also obtain the related rules and regulations of regulatory body, if any, and its guidelines for risk assessment and measures to be taken.
- IA may use following techniques for risk assessment

(a) **Qualitative Techniques**

- Checklists
- Safety Audits
- Task Analysis (TA)

(b) **Quantitative Techniques**

The proportional risk-assessment (PRAT) technique: This technique uses a proportional formula for calculating the quantified risk due to hazard. The risk is calculated considering the potential consequences of an accident, the exposure factor and the probability factor.

$$R = P * S * F$$

Where,

R: the Risk;

P: the Probability Factor;

S: the Severity of Harm Factor;

F: the Frequency (or the Exposure) Factor

(c) **Hybrid Techniques**

Fault-tree analysis (FTA): It is a deductive technique focusing on one particular accident event and providing a method for determining causes of that event. In other words, FTA is an

analysis technique that visually models how logical relationships between equipment failures, human errors, and external events can combine to cause specific accidents.

- Internal Auditor should go through this Manual carefully, which will help in understanding the general external and internal risks, being faced by the company / unit. It will also help in ensuring that the management has not missed any type risk which needs to be discussed with the IA.
- Sometimes, the middle and junior level employees of the company adopt casual approach and they undermine the impact of any risk, resulting in not following the suggested guidelines and not developing any sort of its mitigation plan. But when that risk takes place, the management finds itself in unguarded position and company suffers huge loss of human beings, resources, production and finance. IA should, therefore, try to find and highlight any such risk to enforce the management to develop a mitigation plan of that risk also.

Step 4: Draft Report

IA will prepare a draft report within one month of the start of the work which will cover the following points / comments on –

- Main external and internal risk being faced by the company / unit
- Any other potential risk(s) which have not been estimated by the concerned company / unit
- Risk Management Framework of the company / unit
- Working of Risk Management Committee
- Communication from top management about risks and risk mitigation to lower levels.
- Frequency of this communication
- Sensitivity of the management and employees about Risk Management Framework
- Comments on the rules and regulations of regulatory body, if any, and its guidelines for risk assessment and measures taken by the company / unit.
- Training programmes of the company on risks involved and steps taken for the employees and all concerned at different levels.

- Comments on the decisions of the BOD / higher management on Risk Management Framework and Action taken by the concerned officials. If deviation is found, that should be highlighted specifically.
- Comments on adequacy or inadequacy of the Risk Management Framework of the company / unit
- The risk / risks which have been undermined or missed by the management.
- Comments on the replies of the Management of the questions of the Questionnaire, as advised in this manual.
- Suggestions for the further improvements.

Step 5: Management Response

The above draft report will be submitted to the management and its comments will be invited within next fifteen days.

Step 6: Closing Meeting

After receiving comments from the management, the Internal Auditor may have final meeting with the management and other concerned officials.

Step 7: Final Audit Report Preparation

The Internal Auditor will submit the final Audit Report within three months of the start of the work.

DRAFT REPORT

This Internal Audit report on risk management is only indicative. The actual report may vary in points, figures, facts, contents, annexures and details.

Internal Audit Report

Department: _____

Review of the Risk Management Framework

Index		
Sno.	Headings	Page
1	Background	
2	Audit Scope & Objectives	
3	Audit Approach	
4	Summary of main findings	
5	Action Plan	
6	Conclusion	
7	Acknowledgments	

BACKGROUND

This report has been prepared as a result of the Internal Audit review of Risk Management as part of the ____ (year) Internal Audit Plan.

A review was carried out in ----- (year) covering the management’s approach to Risk Management and the establishment of a framework. A report was prepared that recommended certain actions be taken by management that would embed a framework for Risk Management within the departments of the Company. Given the importance of ensuring that there is ongoing progress of the framework, it is considered prudent to establish whether agreed actions by management are being progressed and where possible to further assist with framework development. In order to establish the progress made by management to date, following three areas were included for this review –

- To establish whether the recommendations from the ----- (year) report have been implemented.

- Risk management arrangements are sufficiently developed to provide an effective operational management tool.
- Whether departmental loss control groups have set up operational and strategic risk registers within a set timescale.

As a result of our audit work, findings were generated. These findings were subsequently discussed with management and where appropriate included in the action plan for future implementation.

AUDIT SCOPE AND OBJECTIVES

The broad objective of the audit is to evaluate whether there is a Risk Management Framework (RMF) in place which can enable the risk management process to be carried out and developed in a comprehensive manner, whereby all significant risks are identified, evaluated, controlled, monitored and reported in accordance with best practice.

The adequacy of the arrangements to meet the objective has been assessed using a grading of one to 5 points. Five points indicate good arrangements and one-point inadequate arrangements are in place. The assessment is set out in figure 1. The assessment has been made by considering the value and significance of the findings and recommendations.

AUDIT APPROACH

The following approach was used to satisfy the objectives of the audit:

- Discussions were held initially with the Head of _____ and the Governance and Risk Manager for background to risk management procedures and development in the Company and its relationship with promoting the principles of Best Value within the Council.
- Internal Audit prepared and requested the completion of a questionnaire by management to assist in addressing the above objective.
- Tests were devised and conducted as part of the exercise, and relevant evidence of progress made was requested and reviewed.
- Any problem areas were highlighted and brought to the attention of management via a draft report and their comments were incorporated into this report where appropriate.
- A final report was prepared for the attention of the Board of Director of _____.

SUMMARY OF MAIN FINDINGS

Internal Audit in the course of the audit found through testing that a number of key steps have been achieved in implementing recommendations from the ----- (year) Risk Management Framework report. However, a few areas remain to be fully progressed to conclusion.

Risk management procedures need to be finalised and issued to departments. The procedures will provide the Loss Control Groups (LCGs) with a formal operating framework. This should then be presented to the Audit Committee for approval.

The SMT has presently reviewed and approved the Company Risk Register. A quarterly report is prepared for the SMT and Audit Committee on risk management. This could be enhanced with a list of high-level risks gathered from departments on a quarterly basis. This will provide evidence to the SMT and Audit Committee that high risks have been identified and management is aware and assessed these risks.

In addition, the quarterly report to the SMT and Audit Committee should include perceived departmental benefit outcomes of embedding the risk management process within the Council.

It was found that the Risk & Corporate Governance Manager did not have a formal record of DMT minutes delegating authority to LCGs. It is therefore recommended that a copy of each DMT delegated authority should be passed to the Risk & Governance Manager to be incorporated within the risk management procedures and operating framework document.

ACTION PLAN

The action plan attached at Appendix has been compiled with the cooperation and agreement of the Head of Democratic Services and Governance.

Internal Audit considers that, in an effort to improve the quality of information, monitoring and control, the recommendations should be implemented in accordance with the agreed action plan. Management have set achievable implementation dates and will be required to provide reasons to the Audit Committee for failure to implement within the agreed timescale. Where management decides not to implement recommendations it must evaluate and accept the risks associated with that decision.

A system of grading audit findings, which have resulted in an action, has been adopted in order that the significance of the findings can be ascertained. Each finding is classified as fundamental, material or minor. The definitions of each classification are set out below: -

Fundamental - major observations on high level controls and other important internal controls. Significant matters relating to factors critical to the success of the objectives of the system. The weakness may therefore give rise to loss or error.

Material - observations on less important internal controls, improvements to the efficiency and effectiveness of controls which will assist in meeting the objectives of the system and items which could be significant in the future. The weakness is not necessarily great, but the risk of error would be significantly reduced if it were rectified.

Minor - minor recommendations to improve the efficiency and effectiveness of controls, one-off items subsequently corrected. The weakness does not appear to affect the ability of the system to meet its objectives in any significant way.

CONCLUSIONS

It is the opinion of Internal Audit that good progress has been made by the Company to address the requirements of introducing a Risk Management framework.

However, during the course of the audit, some areas were identified as requiring further development and therefore recommendations have been made. These have been discussed with management and an action plan agreed. (Any issues not accepted by management are done so with their knowledge and acceptance of risk and control weakness.)

Figure one below sets out a summary of the overall conclusions arising from the audit in terms of the specific objectives detailed above.

Figure 1: Summary of overall conclusions

Specific Objectives	Assessment
To establish whether the recommendations from the 2006/07 report have been implemented.	
Risk management arrangements are sufficiently developed to provide an effective operational management tool.	
Whether departmental loss control groups have set up risk registers within a set timescale.	

ACKNOWLEDGEMENTS

Thanks are due to Head of _____ and his staff for their co-operation and assistance during the audit and the preparation of the report and action plan. Thanks, are also due to _____ and staff along with Audit Scotland who provided comment on the relevance of the proposed model.

Internal audit department of _____ has prepared this report. Its work was limited to the scope mentioned above in this report. It cannot be held responsible or liable if information material to our task was withheld or concealed or misrepresented.

This report is private and confidential for the Company's information only and is solely for use in the provision of an internal audit service to the Council. The report is not to be copied, quoted or referred to, in whole or in part, without prior written consent.

Appendix

ACTION PLAN

Action Plan No.	Para	Grade	Weakness identified	Agreed Action	Responsible Officer	Date of Implementation
1	2.3	Material	Operating procedures are to be finalised and issued to departments. This will also offer an operating framework for departmental LCGs and present to the Audit Committee for approval	This is close to completion as the necessary documents have been prepared and will go to the next RMG for review and approval.		
2	2.1	Material	The quarterly report to the SMT and Audit Committee does not include a list of high-level departmental risks and any perceived benefits resultant from embedding the risk management framework.	The quarterly report will in future include these issues		
