

## **ENVIRONMENTAL AUDIT FOR MINING INDUSTRY**

### **Environmental auditing**

An environmental audit is a systematic, documented, periodic and objective evaluation of how well environmental regulatory requirements and commitments are met. Environmental audit is one tool that can be used by an organization, in the context of its environmental management system, to help determine its environmental performance.

The challenge to the auditor normally is selecting and determining the scope of the audit. During the planning stage, the environmental problem(s) and responses in mitigating the negative consequences are identified. Further, auditors need to prioritize and limit the audit area. The audit criteria are normally drawn from international conventions, legislation, policies, and programs. Case studies of audits on mining activities for each topic, auditors will develop audit criteria using experiences from similar audits conducted in other countries.

Audits for mining means focusing not only on the traditional economic concerns, but also on new social, economic and environmental concerns, particularly in developing countries like India with resources based economics. This includes a wide range of conventions, protocols, declarations, treaties, standards, codes and recommendations relating to environmental, social and economic norms. These steps should be used to define the objectives, scope, and criteria of a single audit on minerals and mining.

### **Levels of Auditing**

A different level of audit may be chosen based upon why the audit is being conducted. Audit practices can be differentiated based on the level of auditing, but the activities and guidelines are same at any level. Audit team should plan properly before reaching to the site. Audit team should collect the maximum fruitful information from the site. At last after auditing team have to compile the final report. Three broad level of audit can be identified:

#### *Self-Auditing/Self-assessment*

Team members are selected from the staff of the business, operating unit or department to be audited.

#### *Internal Audit*

Team members are selected from employees of the organization, but not from the business, operating unit or department to be audited. In some circumstances it may, however, be of benefit to have a representative of the unit on the audit team. They should not be team leaders

#### *External Audit*

Team members are drawn from outside the organization for example, consultants. The team may, however, be assisted by employees of the organization such as a business, operating unit or departmental manager acting as a guide and advisor. This type of audit may be useful where third party benchmarking, certification and neutrality is required, or where company resources do not allow internal audit.

### **Types of Audits**

#### *Financial Audit*

Includes Cost from Environmental Policies and obligations- Pollution, abatement cost, cost of decontamination of land, cost of decontamination of water etc. Financial audit has to probe Environmental issues and ensure correctness of Environmental cost, Liabilities, Assets. This type of audit ensures disclosure of Environment liabilities, non-compliance of obligations and penalty etc. Cost incurred for making environmentally clean atmosphere before commencing the operations— upfront cost, such cost if incurred would be treated as environmental cost to commence the business. Decontamination of the land for a new business, cleaning of plants and machinery etc are upfront costs to be considered for making the venture environmentally clean before the business is handed over to others is backend cost.

Environmental liabilities include the liabilities arising out of fees and penalties levied by regulators, other liabilities as result of non-conforming of rules and regulations imposed by the Govt/regulators etc. Liabilities

for rehabilitation of displaced persons from a project site and liabilities for cleaning of environment for fresh air, fresh water and land etc.

*Compliance Audit*

Compliance audit leads the concept of environment protection to sustainable development. Audit of Compliance includes:

- International Environmental Treaties
- Individual Legislation for Environmental issues in alignment with Treaties
- Governments frame Environmental Programmes for Environmental issues
- Audit of Legislation

*Performance Audit*

Conventionally in mining industry Three Es concept – Economy, Efficiency and Effectiveness is used since many decades. Environmental Auditing is the 4<sup>th</sup> E. Two more Es are the specialty of performance audit— Ethics, Equity. These two Es focuses on compliance of Environmental laws, performance Audit of Environmental programmes, Environmental impact of normal programmes of Government, Environmental Management Systems, Evaluation of proposed Environmental policies, Environmental issues being implemented by Governmental agencies, NGOs etc and audit of Regularity, bodies to ascertain their roles in pollution control, abatement etc.

**Auditing in Mining sector**

In mining activities, there are six possible areas of focus in which laws, regulations, and direct agreements with the mining companies, as well as proactive policy interventions, can be designed. The six areas are land and water use; waste management; chemicals and pollutants; tailings disposal; human health risks; and potential environmental risks and the plans to mitigate these risks. It is important to note that adequacy of environmental and social safeguards have to be ensured at all stages of a mining operation, ranging from exploration, construction, operation, to the closure of the mine operation. The nature of mining activities affects the whole environmental media, be it water, land, forest, fisheries etc. author advice auditors who are conducting a mining audit to consider other relevant guidance to ensure that the mining audit is adequate and comprehensive. The following are some of the areas that may be relevant to an audit on mining:

- *Auditing Biodiversity*: – loss of biodiversity due to mining activities
- *Auditing Government Response to Climate Change*, – emission of greenhouse gases due to mining processes
- *Auditing Forests: Guidance for Supreme Audit Institutions* – forest degradation due to mining
- *Towards Auditing Waste Management* – generation and disposal of waste from mining operations