Chapter 6

Environmental Audit
An Overview
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ENVIRONMENTAL AUDIT-AN OVERVIEW

6.1 INTRODUCTION

A self-introspection by the mankind about the uses and abuses of the natural resources and the impacts it had on the environment and nature's retaliation in terms of ozone layer depletion, emergence of unknown viruses, which threatened the peaceful existence of the living species, has resulted in growth of environmental awareness and legislations. Environmental issues redefined the business management philosophy from mere accountability based on profitability to more society sensitive and responsive/responsible organizations striving for a balance between environment and profit in a sustainable development way. Organizations have been threatened with closure, costly legal cases, for their environmental failure from green groups, legal enforcement authorities and these issues became a crucial risk factor to be managed in order to survive. Conducting environmental audit and reporting the performance was one of the ways to manage and minimize this risk.

Organizations have responded in a proactive manner to environmental issues in western countries. With the awareness among its stakeholders like shareholder, government, lender, general public compelled organizations to respond to environmental issues and it's reporting in financial and non-financial terms. While stakeholders needed an attestation about the quality of the reporting and organizations also required expert professional guidance which will help them in setting environmental goals, systematizing them, periodical analysis against the benchmarked levels, to check the compliance with the regulatory framework etc., has resulted in the birth of environment audit as a distinct professional function.

The term environment audit presently understood and includes a wide range of activities and services now grouped under this broad head. Presently, these services at the moment provided mainly by Non-CA professionals, notably chemical engineer, lawyers and other technical professionals, without any level of standardization being achieved in conducting and reporting the same.

Audit is an assurance function, attesting the accountability of information furnished by the businesses to the stakeholders, with established reporting standards, though within the sphere of audit, one can offer the related services of review, agreed upon procedures and compilation services. The stamp of audit increases the credibility of the information provided by an organization to the outsiders, due to the factors of auditor's integrity, objectivity, and
independence coupled with his skills, competence gained out of systematic training and continuous knowledge acquisition. As noted in the above paragraph, with a very wide range of services and methodologies provided by an understanding of the term environment, audit could vary due to different perception. Environment reviews, checking the compliance with the environmental legislation etc., could be termed as an audit and the stakeholders could understand term to mean a high degree of assurance that is normally associated with an audit, which in reality is not.

The objective of this chapter is to define the environment audit in general term, offer explanation and point of discussion on the subject, and the present position under the Indian context and the role of chartered accountant in this audit.

6.1.1 ORIGIN OF ENVIRONMENTAL AUDIT

Environmental audit is at a relatively formative stage even in western countries in the recent past with internal audit departments checking them as part of their legal compliance program. Increasing public concern about the environmental translated into legislative activism in this field. Proactive companies started demonstrating their environmental concern and the steps initiated by them in terms of sustainable development in their accountability report. The enactment and strict enforcement of various environmental laws by developed-countries in respect of maintenance of air, water, waste management, transportation and storage and disposition of hazardous goods, noise etc., made the non-compliance with environmental legislation a costly affair for the business. The enforcing authorities were armed with the search and seizure power. Though environment audit is not a statutory requirement in advanced countries, business house use this as a tool of their demonstration for sustainable development and social commitment.

6.1.2 TYPES OF ENVIRONMENTAL AUDITS

Corporate greeting audit, Emissions Audit, Waste management Audit, site cleanup investigation, pre purchase and Property transfer audit, Environmental Compliance Audit, Environment Management Audit, Environment liability Audit, Environment Impact Assessment, Energy Audit, Environment risk Audit, Product life Cycle Audit are some of the types of audits which are commonly understood as Environment audit. However regardless of the different terminology used, they can be broadly classified in the following categories.
ENVIRONMENTAL IMPACTS ASSESSMENT

This is a study, which stimulates and visualizes the impact on the environment because of a proposed activity. Due to prospective nature, this can’t be strictly called an audit, but commonly understood as part of environment audit.

ENVIRONMENT CONSULTING SERVICES

This studies certain areas to achieve a particular objective like reduction in consumption and cost of energy, reduce waste, improve process efficiency by reducing the level of toxic emissions and effluents, identification of environment friendly alternatives. These services require extensive scientific, technical and operational expertise.

SITE ASSESSMENT

Site assessments refer to the study of particular site to determine the extent of contaminant, due to discharge of toxic material or waste. The study would normally involve a
1) Preliminary review
2) Determination of contamination levels and
3) Suggesting remediation methods. This is normally carried out to satisfy the requirement of lenders, buyers and regulatory authorities.

PRELIMINARY REVIEW

Traces the history of the land through the records of the statutory authorities. Observe the operations to determine the methods of waste handling and storage. Assessment of properties in the neighborhood. Assess the soil and vegetation damage.

DETERMINATION OF CONTAMINATION LEVELS

Collection of samples including sub-surface survey, analyze for determination of the extent of impact of the operations of the organization on them against the benchmarked levels.

SUGGESTION OF REMEDIAL METHODS

Determination of clean up requirements, identification of remedial process, evaluation among various alternative methods for assessment of costs, efficiency and effectiveness and planning and implementing the remedial scheme.
OPERATIONAL COMPLIANCE ASSESSMENTS

Operational Compliance Assessments refers to the practices of an entity regarding the compliance against laws and regulations concerning environment in its day-to-day operations.

6.2 ENVIRONMENT MANAGEMENT SYSTEM ASSESSMENT

Environment Management System Assessment provides an overall assurance to the management as to the effectiveness, efficiency and continuity of the environmental management system of the organization by benchmarking the performance against organization’s stated environmental policies. This requires the organization to travel beyond the minimum environmental compliance and the scope would include the matters such as risk identification, emergency response measures, employee training, information recording and reporting and follow up on the findings.

This would include a study of all the aspect of an organization’s functions against its impacts on all the natural resources like air, water, soil by studying the effect of waste management, transportation of dangerous goods, decommissioning and disposition of contaminated land, noise and vibration and handling and storage of material.

The International Chambers of Commerce in 1989 define the term Environment Audit as systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing with the aim of helping to safeguard the environment by (1) facilitating management control of environmental practices and (2) assessing compliance with company policies which would include meeting regularly requirements. The definition suggests environment audit as a continuous function as against onetime assessment.

Combining the net effect of site assessment, operational compliance assessment and the environment management system assessment, Environment Audit can be defined as methodical process to verify and evaluate environment performance of an organization in terms of regulatory compliance and/or its own set of environment goals which go beyond the minimum legislative requirement, on a regular basis.
6.3 ROLE OF CHARTERED ACCOUNTANTS IN ENVIRONMENT AUDIT

6.3.1 INTRODUCTION

Environment audit traces its growth to legislation. Awareness about its potential in identifying in cost saving, efficiency in operations, and reduction in liability for non-compliance, acts as an insurance against future liabilities and its effect on the organization’s profitability, has resulted in its growth as a specialized profession with the requirement of cross functional knowledge in the fields of auditing, technical engineering, scientific, legal, financial and management. In order to appreciate the role of a traditional auditor in the environment audit function, a comparison of the requirement of the traditional and environment audit and now traditional audit function, measures up to the requirement of environment audit would be meaningful.

6.3.2 WHAT IS AN AUDIT?

As per the statement on standard Audit practices 1(SAP 1) issued by the Institute of Chartered Accountant of India, auditing is defined as an “Independent examination of financial information of an entity, whether profit oriented or not, and irrespective of its size or legal form, when such an examination is conducted with a view to expressing an opinion thereon”. The opinion expressed by the auditor is the culmination of the process of obtaining sufficient and appropriate audit evidence by performance of compliance procedure and substantive tests, in respect of the assertions in the financial information. The four key prerequisites of an audit emerge out of the above is Auditor’s Independence &objectivity, Verifiable Assertions, Collection of Evidence and Expression of an standards of performance has emerged as a main criteria for the success of the profession and this can be added as the fifth perquisite.

INDEPENDENCE AND OBJECTIVITY: Do the user need the independence and objectivity of the auditor?

STANDARDS OF PERFORMANCE: Can the user expect standards of performance from every auditor in terms of established criteria of assessment?
VERIFIABLE ASSERTION: Is it possible for the management to prepare a verifiable assertion? That is, there are underlying system or record which provide a basis of preparation of the reporting information.

COLLECTION OF EVIDENCE: Is it possible for the auditor to obtain sufficient and appropriate evidence to support his examination?

EXPRESSION OF AN OPINION: Is it required by the auditor to express an opinion in the form of a report as to the confirmation of the criteria established for assessment?

KNOWLEDGE AND SKILLS – A COMPARISON BETWEEN FINANCIAL AUDIT AND ENVIRONMENT AUDIT

As per SAP 1, financial auditor acquires the specialized knowledge skill and competence through a combination of general education, technical knowledge obtained through study and formal courses concluded by a qualifying examination recognized for this purpose and practical experience under proper supervision. In addition the auditor requires a continuing awareness of development including pronouncement of ICAI on accounting and auditing matters and relevant regulations and statutory requirements. As per SAP 8 & 20 on Audit Planning & knowledge of the business, an auditor has to obtain a level of knowledge of the client’s business that will enable him to identify the events, transactions and practices that, in his judgment are significant.

ICC’s environment auditing guidelines 1989, states requirement of professional competence of an environment auditor as team members should be appropriately qualified and sufficient senior to provide a technically sound and realistic appraisal, and to command respect. The skills required fall under the headings of general environmental
Table-6.3.1
A COMPARATIVE ANALYSIS OF FINANCIAL AUDIT AND ENVIRONMENT AUDIT

<table>
<thead>
<tr>
<th>Analytical factors</th>
<th>Financial audit</th>
<th>Environmental consultancy services</th>
<th>Site assessments</th>
<th>Operational Compliance Assessment</th>
<th>Environmental Management system assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>USERS</td>
<td>Management &amp; stakeholder</td>
<td>Management &amp; stakeholder</td>
<td>Management &amp; stakeholder</td>
<td>Management &amp; stakeholder</td>
<td>Management &amp; stakeholder</td>
</tr>
<tr>
<td>OBJECTIVITY &amp; INDEPENDENCE</td>
<td>Absolute necessity</td>
<td>Desirable</td>
<td>Important from user's view</td>
<td>Important from user's view</td>
<td>Important from user's view</td>
</tr>
<tr>
<td>STANDARDS OF PERFORMANCE</td>
<td>Very high standards</td>
<td>Not uniform as no standard setting body is evolved</td>
<td>Not uniform as no standard setting body is evolved</td>
<td>Not uniform as no standard setting body is evolved</td>
<td>Not uniform as no standard setting body is evolved</td>
</tr>
<tr>
<td>VERIFIABLE ASSERTIONS</td>
<td>Essential</td>
<td>Not essential mostly exploratory</td>
<td>Not essential and often not possible due to non maintenance of relevant data</td>
<td>Not essential and often not possible due to non maintenance of relevant data</td>
<td>Possible and depends on the Management</td>
</tr>
<tr>
<td>COLLECTION OF EVIDENCE</td>
<td>Must acceptable standards of collection to rule out a misstatement in the financial statement</td>
<td>Not a must in the sense of an audit</td>
<td>Must-no generally accepted standards for collection</td>
<td>Must-no generally accepted standards for collection</td>
<td>Must-no generally accepted standards for collection</td>
</tr>
<tr>
<td>EXPRESSION ON OPINION</td>
<td>High degree of positive assurance but not absolute assurance</td>
<td>No assurance-risk area identified improvements suggested</td>
<td>No assurance Only findings reported</td>
<td>No assurance finding on compliance or non compliance reported</td>
<td>Moderate assurance findings, Conclusions And recommendations reported</td>
</tr>
</tbody>
</table>

Affairs and policy, specific environmental expertise and operational experience and knowledge of environmental auditing. This points that the composition of the team is vary directly related to the functions that the team member has to perform during the audit. It should comprise of assessors of environmental performance (technical) and auditors (with adequate audit knowledge, skills and competence) to audit the record and find the compliance...
with the stated procedure and policies. In short the following are skill set requirement of the team.

Technical training and experience appropriate to work called for in the audit.

- An understanding of the basic auditing theory and procedure and the experience to apply it to the particular assignment.
- A working knowledge of the regulations, verifiable assertions and standards appropriate to the scope of the audit.
- General familiarity with the type of operations to be reviewed and the issues likely to be encountered within the audit scope.

Traditional financial auditor acquire generic and sometimes more extensive professional knowledge and skills about the specific business which carried on by their clients. Coupled with their qualities such as honesty, integrity, independence, commitment to client’s needs, subordination of personal interests to those of professional interest make them an ideal candidate to conduct the environment audit with acquisition of certain specific skill sets requirement for this type of audit. In respect of highly scientific and technical skills required, he can avail the services of an expert as provided in SAP 9. The following table depicts the comparison between the knowledge requirement and the skill and competence of a financial auditor non-financial auditor conducting an environment audit.

### 6.3.3 THE OVERALL POSITION OF THE FINANCIAL AUDITOR WITH RESPECT TO ENVIRONMENT AUDIT

Environmental audit, as it stands today, comprise of site assessments, operational compliance program and environment management system. It appears from the discussion above, Chartered Accountants have a very limited role to play in respect of site assessments because high degree of technical knowledge requirements. In respect of operational compliance program or environment management system, he can play the role as a team member, advisor or as an external service provider.
### Table 6.3.2

**Requirement of knowledge Required for Environment audit**

<table>
<thead>
<tr>
<th>Requirement of knowledge Required for Environment audit</th>
<th>Skills possessed By Financial Auditor</th>
<th>Skills Possessed By Other Professionals (Non-Audit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervision and planning</td>
<td>High</td>
<td>High*</td>
</tr>
<tr>
<td>Assessment</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Evidence collection and evaluation</td>
<td>High</td>
<td>High*</td>
</tr>
<tr>
<td>Testing method</td>
<td>High</td>
<td>High*</td>
</tr>
<tr>
<td>Reporting result</td>
<td>High</td>
<td>High*</td>
</tr>
<tr>
<td>Theory and concept of audit</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Environmental laws and regulations</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Technical knowledge</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Industry specific norms - general</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>-Environmental</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Operational management</td>
<td>Low</td>
<td>Varies</td>
</tr>
<tr>
<td>Overall knowledge of business corporate governance, legal and economic context of business, accountability reporting etc.</td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>

* Indicate the desirability of such levels, though it is not always demonstrated.

### 6.3.4 OTHER ISSUES

#### Service Standards

There is a need for generally recognized standards for conduct of these three main categories of environment audit. The lack of standards results in confusion about the objectivity, scope, terminology and practices.

#### Reporting Standards

A major area requiring attention in an environment audit, is the reporting standards development on the Audit as well as in the environmental performance of an organizational, which enable a meaningful comparison between inter and intra industry. An effective standards has to be developed in terms of identifying types of reporting models, standardization of measurements of performance and the question of presenting the audit report whether along with the statutory audit report or as separate report or as a annexure to annual reports etc.,

#### Management Standards

There is also need for establishing appropriate set of standards for environmental performances or environmental management practices, which will serve as a measure scale. Lack of this often leads to confusion about the objective of the audit.
6.3.5 CONDUCTING ENVIRONMENTAL AUDIT

6.3.1 Conducting Environmental Audit

Audit Planning

- Obtain Commitment
- Define Audit Scope & Site
- Assemble on Audit Team
- Pre Audit

APreaudit Activities

- Level of Audit Plan
- Send out preferred Pre-audit
- Review Background Information
- Review of Relational Information
- Conduct initial site visit
- Develop Onsite Questionnaire And Audit Protocols

B Onsite Audit Activities

- Opening Meeting
- Document Review
- Staff Interview
- Review Audit evidence
- Closing Meeting
- Past audit

C Audit Planning

- Collect Information
- Preface Audit Report
- Circulate Draft Audit Report For Comments
- Final Reporting
- Audit Follow up

Audit Follow up

- Develop Action Plan
- Implement Action Plan
- Checking and Monitoring
- Review Action Plan
- Next Audit
6.3.5 CONDUCTING AN ENVIRONMENT AUDIT

AUDIT PLAN: OVERALL

Identification stages

Environmental substances and process that are to be audited are identified and defined. Scope and objectives, levels of confidentiality etc., are to be determined.

Review And Assessment Stage

Corporate and divisional environment policies are viewed, program for each facility developed, environmental substances and processes are inventoried, responsibilities are fixed, identification of inconsistencies, status of compliance and noncompliance reported.

Correction Stages

Reports on corrective action initiated by the organization such as obtaining permission, applying for permits/licenses, installation of equipment, setting a reporting system, staff-training program and Philippe audit.

AUDIT PLAN: SPECIFIC

Scope of the Audit

Identify the nature of assignment as to whether it is site assessment or operational compliance assessment or environment management system assessment.

List of Regulatory/Statutory Legislation

Identify the regulatory law in force in terms of license requirement in force, compliance schedules, monitoring requirements etc.,

Audit

Against the backdrop of the scope and legislative requirement verify the following.

- Review existing compliance reporting and testing and maintenance procedure.
- Verify whether all pertinent parameter are being monitored, waste treatment parameters are determined in accordance with the type of waste generated.
- Evaluate the sampling and analytical procedure in term of representative value, frequency, and type of contaminants used.
- Examination of the location of onsite discharge, treatment, and storage and disposal sites.
• Review of authenticity of the internal reporting and data generation.
• Examining the monitoring and control equipments and verification procedure for them in terms of frequency of testing, acceptability of the devices used and maintenance schedules followed.
• Review of the quality of the organization’s staff involved in process in terms of understanding the concept of environmental performance and its impacts.

EVALUATION
An evaluation of the audit observations in terms of Administrative (Regulatory Aspect), Policy Reviews (in terms of organization’s stated environmental policies And) Technical Review (involving review of the nature, character and size of the organization’s operations, the adequacy of the testing and sampling methods, efficiency of the equipment installed for controlling environmental hazards, procedure for emergencies and contingent plans).

REPORT
The reporting based on the evaluation should consider the following.
• Current practices correctly/incorrectly followed
• Past practices of non-compliance
• Potential problem areas
• Deficiencies in the systems
• Reliability of the information generated
• Potential liabilities/cost saving areas.

RECOMMENDATIONS:
Fill in your recommendation in the report.
Table-6.3.3

Basic steps of An Environmental Audit-As Suggested By International Chamber of Commerce

**PRE AUDIT ACTIVITIES**

<table>
<thead>
<tr>
<th>Select and schedules facilities to audit</th>
<th>Based on</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Selection criteria</td>
<td></td>
</tr>
<tr>
<td>• Priorities assigned</td>
<td></td>
</tr>
</tbody>
</table>

| Select audit team members               |          |
| • Confirm their availability            |          |
| • Assignment audit responsibilities     |          |

| Contact facility and plan audit         |          |
| • Discuss audit program                 |          |
| • Obtain background information         |          |
| • Prepare questionnaire (if necessary)  |          |
| • Define scope                         |          |
| • Determine applicable requirement      |          |
| • Note priority topics                  |          |
| • Modify or adopt protocols             |          |
| • Determine resources needs             |          |

**ACTIVITIES AT SITE**

| Identify and understand management control system |          |
| • Review background information                  |          |
| • Opening meeting                                 |          |
| • Orientation tour of facility                    |          |
| • Review audit plan                               |          |
| • Confirm understanding of internal controls      |          |

| Assess management control systems               |          |
| • Identify strengths and weaknesses of internal controls | |
| • Adapt audit plan and resource allocation       |          |
| • Define testing and verification strategies     |          |

| Gather audit evidence                           |          |
| • Apply testing and verification strategies      |          |
| • Collect data                                   |          |
| • Ensure protocol steps are completed           |          |
| • Review all findings and observations          |          |
| • Ensure that all findings are factual          |          |
| • Conduct further testing if required           |          |

| Evaluate audit findings                         |          |
| • Develop complete list of findings             |          |
| • Assembles working papers and documents        |          |
| • Integrate and summarize findings              |          |
| • Prepare report for closing meeting            |          |

| Report findings to facility                     |          |
| • Present findings at closing meeting           |          |
| • Discuss findings with plant personnel        |          |
POST AUDIT ACTIVITIES

| Issues draft report | • Correct closing report  
|                     | • Determine distribution list  
|                     | • Distribute draft report  
|                     | • Allow time for corrections  
| Issue final report  | • Correct draft report  
|                     | • Distribute final report  
|                     | • Highlight requirement for action plan  
|                     | • Determine action plan preparation deadline  
| Action plan preparation and implementation | • Based on audit findings in final report  
| Follow-up on action plan |