

Environmental Audit: Need of the Hour

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Abstract Environmental audit is a concept which is significant with the development of industrial standards and environmental legislation. Proper guidance is required for both auditor and the auditee on the management, organization and content of the environmental audit. This paper examines the approaches to environmental auditing, the need and importance of environmental auditing, how environmental auditing can be conducted in an organization, what are the benefits of an organization which can be achieved through environmental audit.

Keywords: *environmental audit, environmental management, effective auditing, International Organization for Standardization (ISO)*

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1. Introduction

Environmental audit is an environmental management tool for measuring the effects of certain activities on the environment against set of standards or criteria. Depending on the types of standards and the focus of the audit, there are different types of environmental audit. All types of organizations are now realizing the importance of environmental matters and ready to accept their environmental performance. Also, they are willing to be scrutinized by a wide range of interested parties for their own quality enhancement.

Environmental auditing is used to investigate, understand and identify certain activities performed by the organization. These are used to help improve existing human activities, with the aim of reducing the adverse effects of these activities on the environment. An environmental auditor will study an organization's environmental effects in a systematic and documented manner and will produce an environmental audit report. There are many reasons for undertaking an environmental audit, which include issues such as environmental legislation and pressure from customers or stake holders of the organization.

2. What is Mean by Environmental Audit?

Auditing, in general, is a methodical evaluation which involves analysis, tests and confirmations of procedures and practices whose goal is to verify whether they comply with legal requirements, internal policies and accepted practices. Environmental auditing is often used as a generic term covering a variety of management practices used to evaluate an organization's environmental

performance. It refers to checking systems and procedures against standards or regulations, but it is often used to cover the gathering and evaluation of any data with environmental relevance - this should actually be termed an environmental review.

In 1989, the International Chamber of Commerce (ICC) produced a definition for environmental audit which is along the same lines.

"A management tool comprising 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 facilitating management control of practices and assessing compliance with company policies, which would include regulatory requirements and standards applicable".

The key concepts in the definition are as follows.

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| Verification | : audits evaluate compliance to regulations or other set of criteria. |
| Systematic | : audits are carried out in a planned and methodical manner. |
| Periodic | : audits are conducted to an established schedule. |
| Objective | : information gained from the audit is reported free of opinions. |
| Documented | : notes are taken during the audit and the findings recorded. |
| Management tool | : audits can be integrated into the management system |

Environmental auditing provides a 'snap-shot' of looking at what is happening at that point in time in an organization. It is carried out when a development is already in place, and is used to check on existing practices, assessing the environmental effects of current activities.

The International Organization for Standardization (ISO) has produced a series of standards in the field of environmental auditing. These standards are basically

intended to guide organizations and auditors on the general principles common to the execution of environmental audits.

2.1. Relevance and Importance of Environmental Audit (EA)

An environmental audit is an evaluation of an organizational facility's waste generation and waste management practices, as well as an assessment of its compliance with environmental laws at the local, state and national levels. Environmental auditing is a management tool that enhances the overall environmental performance of manufacturing facilities and is now generally a requirement for property transfers and reduction of legal liabilities due to improper or inadequate waste management operations. The impetus provided by economics of scale has led to a steady expansion in the size and complexity of chemical and industrial plants during this century. The occurrence of a sequence of well-published major accidents has led to a greater awareness towards 'sustainable development'. It is in the interest of industry to practice Environmental Auditing to protect, conserve and manage the environment. Environmental Audit in the industrial sector would entail a 'cradle to grave' approach, in which all steps of manufacturing products, selection of raw materials, process design, identification of technology for manufacturing, use of energy, reuse of materials, recycling and disposal of the product are taken into consideration instead of focusing only on compliance. The adoption of this Environmental Auditing approach opens many economic opportunities to the manufacturing sector. Sustainability demands the overall maintenance of ecosystems and related ecological processes for the functioning of the biosphere and the industry must realize its responsibilities and contribute its share in maintenance of ecological balance. EA conducted for an 'industry' focuses itself: To input-output analysis in respect of raw materials, energy and water; to conduct health and safety audit including safety precautions to be adhered to while transporting chemicals and to conduct environmental quality audit, which takes care of ambient air quality, stack emissions, solid/hazardous wastes and noise pollution.

2.2. Why Should Institutions or Industry Carry out Environmental Audit?

An audit is an excellent way of identifying environmental risks and liabilities, ensuring legislative compliance and enabling informed decision making. The purpose of an audit is to provide an independent, objective opinion that can be relied on by stakeholders. There are many different types of environmental audit, such as an Environmental Management System (EMS) performance audit, a regulatory compliance audit, a supplier or contractor audit, or a specific 'issue audit' such as for hazardous materials or waste management.

Environmental auditing has a critical role to play in ensuring that organizations fulfil their policy commitments to environmental management and performance. Audits can provide key information to senior management on areas of risk, and progress towards strategic objectives and targets.

Effective auditing can identify regulatory non-compliance and identify areas of poor management and control, which otherwise may result in environmental incidents and damage, operational disruption, costs, damage to reputation and prosecution.

As well as identifying potential risks, if undertaken properly, environmental audits can and often highlight potentially significant operational efficiencies and cost savings. The style and scope of an audit should be tailored to the client's individual needs and priorities. The auditors should work seamlessly with front line staff and senior management, throughout the audit process, to identify important environmental issues and provide robust cost-effective recommendations to solve them.

Positive audit findings can confirm to stakeholders that an organization is exercising effective environmental management and governance and is genuinely pursuing a positive environmental agenda. Effective audits can lead to greater transparency, enhanced stakeholder relationships and stronger brand value. Major attractions of the environmental audits are the following.

- a) Informing senior management and decision makers on Environmental management and performance.
- b) Assessing and identifying environmental risks and known or potential sources of environmental liability.
- c) Identifying non-compliance with legal requirements or contractual commitments and identifying weaknesses in environmental management processes, mitigation measures and controls, before they lead to an incident, down-time, and costs.
- d) Improving the organisational culture awareness of relevant environmental issues and encouraging innovation and continual improvement.
- e) Identifying opportunities for improvement in environmental management and performance, which could lead to increased efficiencies and cost savings.
- f) Demonstrating greater transparent reporting of performance, enhanced stakeholder (e.g., investor, customer, regulator) relationships and strengthening brand value.

The management of an organization should facilitate audits of their operations at an appropriate frequency, which delivers the optimal value. To realize the range of benefits, leaders and managers need to ensure that they have competent and experienced individuals effectively planning, managing, and undertaking environmental audits that focus on key issues and priorities. It is critical that auditing is adequately resourced, supported and communicated by senior management, who appreciate that environmental auditing contributes to overall organizational performance.

The major benefits of conducting such an environmental audit include mitigating the organization's legal and reputation risks, ensuring compliance with environmental laws, reducing operational inefficiencies and improving the environmental performance of the organization.

3. Steps of an Environmental Audit

Following are the steps of environmental audit:

1. Planning the audit, which includes activities to be conducted and responsibilities for each activity
2. Review the organization's environmental protection policy and the applicable requirements, national, state and local requirements.
3. Assessment of the organization, its management and equipment
4. Gather data and relevant information
5. Evaluation of overall performance
6. Identification of areas needing improvement

4. What Documents Organizations Keep for Conducting an Environmental Audit?

Before beginning an environmental audit, an organization should be ready with all the required documents. Here are the six types of documents an organization should keep to begin an environmental audit:

- Maps and floor plans for the facility to define the scope of an audit. They'll clue you into changes that have been made and procedures that might have changed and need a thorough review.
- Collect copies of all environmental permits. These permits are the first step to verifying that the facility is in compliance with the permit terms.
- Collect environmental inspection reports and checklists that prove that inspections have been completed as required. Hazardous waste manifests, sampling data and other inspection reports help show that recordkeeping is up-to-date and in compliance.
- Complete list of all chemicals and other raw materials used, their locations, and amounts helps determine which environmental regulations are applied to the facility.
- Environmental Plans and procedures, best management practices and other applicable documents show how the facility is managing environmental issues and preventing problems.
- Training records of employees, tests, and certificates show that employees have been trained in the knowledge and skills needed to perform their duties. These records also demonstrate the company's efforts to develop and maintain the facilities environmental standards.

An audit can be a valuable tool to determine a facilities compliance with current environmental regulations and record progress being made. It provides additional benefits to the organization:

- An environmental audit helps you to avoid fines by regulatory agencies by identifying non-compliance issues and allowing time for corrective actions before an inspection.
- Environmental Audits increase awareness of environmental standards and employee responsibilities. Increased compliance leads to fewer enforcement actions and penalties.
- Regular environmental audits help to identify and inform management of the newest regulations that apply to the business.

- Environmental audits strengthen employee relationships and improve the organisation's image in the community.
- Organisation with environmental stewardship programs are desirable to investors and employees.
- Environmental audits reduce operating costs by identifying issues sooner, minimizing waste, and allowing the organisation to plan corrective actions.

5. Conclusion

Environmental safety and health auditing developed in the early 1970s, largely among companies operating in environmentally intensive sectors such as oils and chemicals. Since then, environmental auditing has spread rapidly with a corresponding development of the approaches and techniques adopted. Several factors have influenced this growth. Major incidents such as the Bhopal, Chernobyl and Exxon-Valdez disasters have reminded companies that it is not sufficient to set corporate policies and standards on environmental health and safety matters without ensuring that they are being implemented. Audits can help reduce the risk of unpleasant surprises. Since the early 1970s regulations on environmental topics have increased substantially. This has made it steadily more difficult for a company to ascertain whether a specific plant in a particular country is complying with all of the relevant legislation. The public has become increasingly aware of, and vocal about, environmental and safety issues. Companies have had to demonstrate to the public that they are managing environmental risks effectively. The growth of legislation has led to a corresponding explosion of litigation and liability claims. All over the world, there is growing emphasis on the responsibilities of individual directors and on making information available to the public.

References

- [1] M Abbasi, F Nilsson, Themes and challenges in making supply chains environmentally sustainable. *Supply Chain Management, An International Journal*, volume 17 (5), p. 517-530, 2012.
- [2] C Chiang, Insights into current practices in auditing environmental matters *Managerial Auditing Journal*, volume 25, issue 9, p. 912-933, 2010.
- [3] F Costantino, G Di Gravio, M Tronci, Environmental Audit improvements in industrial systems through FRAM. *IFAC-Papers Online*, volume 51, p. 1155-1161, 2018.
- [4] D M Einolf, International Challenges in Environmental Compliance, Auditing, and Supply-Chain Sustainability, ASSE Professional Development Conference and Exhibition, 2008.
- [5] B J Fu, X L Zhuang, G B Jiang, J B Shi, A Y H Lu, Feature: environmental problems and challenges in China, 2007.
- [6] R Gray, Current developments and trends in social and environmental auditing, reporting and attestation: a review and comment, *International journal of auditing*, volume 4, issue 3, p. 247-268, 2010.
- [7] R M Hall, The evolution and new directions in environmental auditing and compliance management, *Natural Resources & Environment*, volume 24, issue 2, p. 3-8, 2009.
- [8] J Maltby, Environmental audit: theory and practices, *Managerial auditing journal*, volume 10, issue 8, p. 15-26, 1995.

- [9] R K Morgan, Environmental impact assessment: the state of the art. *Impact Assessment and Project Appraisal*, volume 30, p. 5-14, 2012.
- [10] Nacanieli Rika, What motivates environmental auditing?, *Pacific Account review*, volume 21, p. 304-318, 2009.
- [11] L Ortolano, A Shepherd, Environmental impact assessment: challenges and opportunities. *Impact assessment*, volume 13, p. 3-30, 2005.



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