

Environmental Accountability Practice in MSME's through ISO 14001

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Abstract: The WTO (formerly Uruguay Round of the GATT) negotiations in 1986 (which addressed the need to minimize nontariff barriers to trade), and the 1992 “Earth Summit” on the environment (which highlighted the importance of a global commitment to environmental quality improvement) are precursors to development of the ISO 14000 series of standards. ISO 14001 EMS is a relatively new environmental entrepreneurship approach to managing environmental risks in organizations, thereby helping to incorporate environmental management issues into corporate strategic decision making. Building an understanding of the unique constraints to implementing and certifying to ISO 14001, especially for SMEs, is an important step to helping them achieve public environmental policy objectives. An objective of this study to assess and consolidate the literature on various dimensions to ISO 14001 certification to throw a light on the importance on the ISO 14001 in the MSME's in this competitive world.

Keywords: ISO 14001, EMS and SME.

I. INTRODUCTION

ISO 14000 is a series of international standards on environmental management that provides a framework for the development of an environmental management system and respective audit programme (Von Zharen, 2001). After the success of ISO 9000 standards and increase in awareness of the environmental protection, ISO formed the Strategic Advisory Group on the Environment (SAGE) in 1991 which carried out intensive conversations among 20 countries, 11 international organizations and more than 100 environmental experts to define the basic requirements of a new approach to environment related standards (Von Zharen, 2001). The development of ISO 14000 seem to have begun after ISO's commitment to support the sustainable development in United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 (Von Zharen, 2001). **Environmental Management System.** An environment management system (EMS) based on the requirements of ISO 14001 is a management tool that enables an organization of any type or size in identifying and controlling the environmental impacts of its activities, continually improving its environmental performance implementing a systematic approach in setting environmental objectives and demonstrating that such objectives have been successfully achieved (ISO, 2010). ISO 14001 is applicable to all types and sizes of organizations including service and business sectors and is the only specific standard of ISO 14000 series against which an organization's EMS is evaluated and certified (Von Zharen, 2001). At present, ISO 14001 :2004 version of the standard is being used for the certification purpose and the main intention of this standard is to provide a framework for a holistic and strategic approach to the organization's policy, plans and actions (ISO, 2010). ISO 14001 requires the commitment of management and employees for the protection of environment with clear assignment of accountability and responsibility (Voorhees, & Woellner, 1998).

ISO 14001 specifies EMS requirements that an organization should meet in order to get certified from a certification body (Whitelaw, 2004). According to EPA (2010), the essential requirements of an environment management system (EMS) under ISO 14001 include:

- A policy statement that includes commitment to prevention of pollution, continual improvement of EMS and compliance with all applicable statutory and regulatory requirements
- Identification of all the aspects of an organization's activities, product and services that can have significant impact on the environment
- Setting environmental objectives and targets
- Implementing the EMS to meet the objectives
- Establishing an internal audit program
- Monitoring and measurement of the performance of the system and taking subsequent corrective and preventive action when the deviations occur in the system
- Periodic reviews of the EMS by top management to ensure its continual improvement 26.

The key elements of ISO 14001 essential for implementing environmental management system are environmental policy, planning, implementation and operation, checking and corrective action and management review (Von Zharen, 2001). According to Whitelaw (2004), ISO 14001 standard is comprised of following clauses: General Requirements (clause 4.1), Environmental Policy (clause 4.2), Planning (clause 4.3), Implementation and operation (clause 4.4), Checking and corrective actions (clause 4.5), and Management review (clause 4.6).

Planning further consists of environmental aspects, legal and other requirements, objectives, targets and programme(s); implementation and operation consists of resources, roles, responsibility and authority, competence, training and awareness, communication, documentation, control of documents, emergency preparedness and response; checking consists of monitoring and measurement, evaluation of compliance, nonconformity, corrective action and preventive action, control of records, internal audit (Whitelaw, 2004).

Benefits of ISO 14001: ISO 14001 encourages top management to have a critical look at areas that are vulnerable to environmental impacts. According ISO (2010) some of the potential benefits of an EMS based on ISO 14001 are as follows:

- Framework for meeting EMS objectives and continual improvement of environmental performances
- Increased efficiency and potential cost savings
- Optimized used of environmental management resources
- Improved corporate image among customers, regulators, stakeholders and public
- Consistency in managing environmental obligations
- Lower distribution cost

II. INTEGRATED MANAGEMENT SYSTEM

The global competition has compelled organizations to invest their resources in enhancing their management efficiency and this has resulted in profound changes affecting every aspects of business including customer care, supplier management, strategy identification and implementation, process engineering and human resources (Renzi, & Cappelli, 2000).

Integration of ISO 9001 and ISO 14001 Management Systems

The latest version of both standards, ISO 9001 :2008 and ISO 14001 :2004 have been developed with the specific intent to be compatible with each other (Cianfrani et al., 2008). The correspondence between the two standards can be seen in Appendix C and Appendix D. According to Cianfrani et al., (2008), the drafters of two families had worked together in developing ISO 9001 :2000 and ISO 14001 :2004 so that both the standards would be compatible and during the development of ISO 9001:2008, following considerations related to the compatibility of both the standards were emphasized:

ISO 9001:2008 is structured to enhance its usability with ISO 14001:2004.

ISO 9001:2008 and ISO 14001:2004 can be used together without unnecessary duplication or conflicting requirements.

Common requirements can form a basis for integrated management systems.

Quality management system processes need not be established separately from an existing management system.

Both of the standards have requirement of commitment from the top management of the organization in the form of a policy statement and establishment of objectives (Black, 2000; Jackson, 2001). In summary, there are sufficient requirements common to ISO 9001 and ISO 14001 standards that provide the basis for the integrated management system.

Environmental Management System Requirements

This is the clause 4 of ISO 14001 and contains the requirements needed for a certifiable environmental management system based on ISO 14001 and is used in assessing the conformance of the system to the standard. This clause corresponds to the title of Quality management system, clause 4 of ISO 9001:2008 standard.

Requirements of the ISO 14000 certification

Objectives, Targets and Programme (s)

This comes under the clause 4.3.3 of ISO 14001 and requires an organization to ensure that the objectives and targets and are consistent with the policy which includes the commitments to compliance with legal and other requirements, continual improvement and prevention of pollution. It is also required that significant aspects, legal and other requirements, issues related to technological, financial and business be considered and documented. In addition to this it requires to include the outline of roles, responsibilities and authorities associated with specific objectives and targets and the process for approving objectives and targets. The corresponding clauses in ISO 9001:2008 are as follows:

- Quality objectives, clause 5.4.1: This clause requires top management to establish objectives that are quantifiable and consistent to the policy and continual improvement of the effectiveness of the quality management system. The processes important to meet the requirements must be thoroughly understood before setting the objectives and those which are set cross functionally should be mutually supportive.
- Quality management system planning, clause 5.4.2: This clause requires the top management to ensure that the planning of quality management system is carried out in order to meet the general requirements, quality policy and objectives. It also requires that the integrity of the quality management system is maintained when changes to the quality management system are made and such changes may result due to modifications to organizational structure, personnel turnover, technological changes or changes in the volume.
- Continual improvement, clause 8.5.1: Discussed previously as the corresponding clause to Environmental policy, clause 4.2 of ISO 14001.

Implementation and Operation

This element comes under the clause 4.4 of ISO 14001 and provides requirements for developing capabilities and support mechanisms necessary to implement environmental policy and achieve objectives. The correspondence of this clause is limited to the title of Product realization, clause 7 of ISO 9001

Resources, Roles, Responsibility and Authority

This element comes under the clause 4.4.1 of ISO 14001 and it requires that roles, responsibilities and authorities within the organization are identified, documented and communicated. It also requires top management to ensure that resources to implement environmental management system are available and appoint a management representative. The management representative can be anybody from within the organization's management team who, irrespective of other responsibilities, oversees the environmental management system and report its performance to the management. The corresponding clauses in ISO 9001:2008 are as follows:

- Management commitment, clause 5.1: Discussed previously as the corresponding clause to Environmental policy, clause 4.2 of ISO 14001.
- Responsibility and authority, clause 5.5.1: Discussed previously as the corresponding clause to General requirements, clause 4.1 of ISO 14001.
- Management representative, clause 5.5.2: This clause requires the top management to appoint a member of organization's management who irrespective of other responsibilities, ensures that the processes needed for quality management system are established, implemented, and maintained. The management representative is responsible for communicating the performance of the quality management system to the top management and quality requirements of customers throughout the organization.

Additionally, the management representative is responsible of acting like a resource person for the outside parties in relation to the quality management system.

- Provision of resources, clause 6.1: This clause requires an organization to provide **all** the resources necessary to implement and maintain the quality management system. This includes personnel, equipments, supplies, utilities, software, buildings, vehicles and instruments.
- Infrastructure, clause 6.3: This clause requires an organization to determine and maintain the infrastructure which may include buildings, workspace, utilities, process equipments, transport vehicles or information system as applicable, needed to achieve conformity to product or service requirements.

Competence, Training and Awareness

This is the clause 4.4.2 of ISO 14001 and requires an organization to ensure that its personnel are adequately trained, competent and aware of their roles and responsibilities within environment management system. The organization needs to develop a procedure in identifying training needs necessary to achieve environmental objectives and provide competency training to those whose work may have significant impact on the environment. The corresponding clauses in ISO 9001:2008 are as follows:

- General (Human Resources), clause 6.2.1: This clause requires the personnel those can affect conformity to product requirements are competent on the basis of appropriate education, training, skills and experience.
- Competence, training and awareness, clause 6.2.2: This clause requires an organization to determine necessary competence and training needs for those personnel whose work may affect the conformity to product requirements and provide necessary trainings to them.

Additionally, it also requires evaluating the effectiveness of the actions taken and making all the personnel aware of their importance in achieving quality objectives and implementing quality management system. It requires documenting the training plan to address the training needs of personnel and maintain records related to personnel education, experience, training and qualifications.

III. COMMUNICATION

This is the clause 4.4.3 of ISO 14001. It requires an organization to develop a procedure ensuring that the communications related to the environment management system are communicated to all employees as an internal communication. It also requires developing another procedure for receiving, documenting and responding to the external interested parties as an external communication. The records of both internal and external communication need to be maintained. The corresponding clauses in ISO 9001:2008 are as follows:

- Internal communication, clause 5.5.3: This clause requires the top management to establish proper communication processes within the organization so as to assure the effectiveness of the quality management system.
- Customer communication, clause 7.2.3: This clause requires an organization to establish proper communication arrangements with customer regarding the product information, orders or contract inquiries and customer feedback and complaints.

Reasons for seeking ISO 14001 certification

The reasons why organizations implement ISO 14001 are generally given as:

- To gain or retain market share via a green corporate image
- To attract more ethical investment
- To reduce insurance risks
- To reduce prosecution risks
- To reduce costs

The requirements of ISO 14001 include:

- Development of an environmental policy
- Identification of environmental aspects and evaluation of associated environmental impact
- Establishment of relevant legal and regulatory requirements
- Development and maintenance of environmental objectives and targets
- Implementation of a documented system, including elements of training, operational controls and dealing with emergencies
- Monitoring and measurement of operational activities
- Environmental internal auditing

IV. CONCLUSION

Companies should incorporate the implications and requirements of the clauses as per the environmental standard ISO 14001. It requires an organization to establish proper communication arrangements with customer regarding the product information, orders or contract inquiries and customer feedback and complaints.

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