International Journal of Advanced Technology in Engineering and Science
Vol. No.3, Special Issue No. 01, November 2015
www.ijates.com
ijates
ISSN 2348 - 7550

OVERVIEW OF IS0-14000:- AN ENVIRONMENTAL MANAGEMENT SYSTEM

M.Wasi Baig[1], Aftab Ahmad[2], Mohd.Ramzan[3]

[1]*Assistant Professor & In-Charge, Integral University Campus Shahjahanpur*

[2,3]*Lecturer, Section of Applied Science, Integral University Campus Shahjhanpur*

ABSTRACT

In the present scenario, environmental matter is not limited only in one country or specific area. The environmental impact affects everywhere and leads to problem all over the world and now a days environmental conservation has become so complicated that it causes pressure to all business organizations as well. Hence there is an urgent need to implement environmental management series to create a balance between investors and customers.In this paper we will study overview of International Organization for Standardization had led to the development of the International Standard for environmental management system series (ISO 14000).

Keywords: Emss, EA, EL, EPE, LCA,T&D, ISO,

I. INTRODUCTION TO ISO 14000

After the success of the ISO9000 series of quality standards in 1987, the International Standards Organization is nearing completion and publication of a comprehensive set of standards for environmental management. This series of standards is designed to cover the whole area of environmental issues for organizations in the global marketplace and prioritize spoken and unspoken customers want and needs and translate these needs into technical characteristics and specification and build and deliver quality products a service by forcing everybody towards customers' satisfaction.

- The structure of the standards is as follows:
- Environmental Management Systems (EMS)
- Environmental Auditing and Related Environmental Investigations (EA)
- Environmental Labeling (EL)
- Environmental Performance Evaluation (EPE)
- Life Cycle Assessment (LCA)
- Terms and Definitions (T&D)
- ISO 14000 Series is the set of standards relating to environmental management system.
- Generally, the standard used for certification is ISO 14001 Environmental Management Systems - Specifications with Guidance for Use.

II. ISO 14000 SERIES

The ISO 14000 series is a set of standards concerning EMS including the activities of designing, producing, delivering and servicing.

The concept of the standard is to enable the organization to continually develop and improve its EMS.

Although the series comprises of many standards, the standard ISO 14001 is used as the direction for EMS certification.

III. WHO SHOULD IMPLEMENT ISO 14000

- Any organization: manufacturers and service organizations.
- Any activities of each organization may cause the environmental aspects and impacts such as noise, dust, waste, contaminants in manufacturing process and ineffectively resources consumption in servicing. These can be minimized by implementing EMS.
- Although each country has already had her own environmental regulations, organizations are able to apply ISO 14000 series effectively within their system on voluntary basis and the benefit obtained is not only for organizations themselves but their society also.

IV. WHAT IS NOT ISO 14000

- It is not a PRODUCT and PERFORMANCE standard.
- Does not establish levels of pollutants or performance.
- Does not establish test standards.
- Does not involve initial performance testing.
- Does not requires or establish final performance goal.
- Does not require the meeting of zero emissions.
- Does not mandate best practice technology.
- Does not require disclosure of performance levels.
- Does not require disclosure of audit results.

V. HISTORY OF ISO 14000

- The reasons for developing these national standards stemmed from the European success terms of the ISO 9000 Quality Management Standards, and from the "green movement" in Europe. These standards were envisioned to provide a market-driven, competitive attitude in business.
- ISO 14000, which is an evolution of ISO 9000 standards, is designed to address process improvements in these environmental areas by way of energy audits, hazardous materials management, and other techniques
- When ISO 9000 quality management systems are integrated with ISO 14000 environmental systems, the two processes support each other. Opportunities for better quality practices exist in the quest for better environmental practices, and better environmental processes are often the result of improved quality.
- A merged system, which is currently available, is often the answer for companies seeking improvement in both areas.
- Historically, document disarray and communication redundancies have made implementation of ISO 9000 and ISO 14000 slow and costly. .
- The advent of new Web-based technologies, however, makes it possible for companies to host entire documentation, project management, and training systems for the implementation of ISO 9000 and ISO

14000 standards, significantly reducing the cost of each individual component and minimizing the time to implementation.

VI. ISO 14000 POLICIES

- Prevention of pollution.
- Continual Environmental Improvement.
- Commitment to comply with Environmental Laws and Regulations
- Applicable in size and scope.
- Establish framework for setting and reviewing objectives and targets
- Documented, implemented, maintained, and communicated to employees.
- Available to the public

VII. ELEMENTS OF ISO 14001

- ISO-14001, outlines 18 elements that must be followed if a facility wishes to be in conformance.
- The 18 elements are divided into six clauses
- Six clauses are
- General Requirements
- Environmental Policy
- Planning
- Implementation & Operation
- Checking & Corrective action
- Management review

VIII. ENVIRONMENTAL POLICY

Ensure commitment to the EMS and define policy that:

- Is based on company's mission and values.
- is appropriate to the nature, scale and environmental impacts of the business
- includes a commitment to continual improvement
- includes a commitment to comply with relevant environmental legislation and regulations
- is documented, maintained and communicated to all employees
- is available to public

IX. OBJECTIVES AND TARGETS

- Documented environmental objectives and targets for each relevant function and level within the organization are required to be established and maintained.
- These set objectives and targets must address legal consideration and other requirements, the facility's significant environmental aspects, technological options, financial/ operational/business requirements, and views of interested parties.

- These objectives and targets must be consistent with the environmental policy.

X. ENVIRONMENTAL MANAGEMENT PROGRAM

- A program(s) for achieving set objectives and targets is required to be established and maintained.
- The program must include designated responsible parties for achieving objectives and targets at each relevant function and level of the organization and the means and timeframe by which the objectives and targets are to be achieved.
  - In addition, the program must be amended as needed to ensure that the environmental management program applies to new developments and new or modified activities, products, or services.

XI. STRUCTURE AND RESPONSIBILITY

- Roles, responsibilities, and authorities are required to be defined, documented, and communicated to facilitate effective environmental management.
- Sufficient resources must be provided to implement and control the environmental management system.
- A specific management representative(s) must be appointed to ensure that EMS requirements are established, implemented, and maintain in accordance with the standard.
- The management representative must have defined roles, responsibilities, and authority for reporting on EMS performance to top management

XII. TRAINING AWARENESS AND COMPETENCE

Appropriate training for all personnel whose work may create a significant impact on the environment must be identified.

Procedures are required to be established and maintained to make employees aware of:

- The importance of conformance with the environmental policy and procedures and with EMS requirements,
- The potential environmental impacts of work activities
- Roles and responsibilities in achieving conformance with policy, procedures, EMS requirements

XIII. COMMUNICATION

- Procedures for internal communication between levels and functions of the company are required to be established and maintained.
- Procedures must also be developed for receiving, documenting and responding to relevant communication from external parties.
  - Finally, processes for external communications must be considered and the decision recorded

XIV. ENVIRONMENTAL MANAGEMENT SYSTEM

- Information describing core elements of the management system and their interaction is required to be established and maintained.
- The information must also provide direction to related documentation.

- ISO 14000 requires documentations much similar to ISO 9000 which makes integration of two systems easier.

XV. DOCUMENT CONTROL

Procedures for controlling all documents required by the standard are required to be established and maintained. These procedures must ensure the following:

- The documents can be located ,
- The documents are periodically reviewed,and approved by authorized personnel,
- The current versions are available at locations where operations essential to the functioning of EMS are done.
- Obsolete documents are promptly removed
- Further, documentation must be legible,

XVI. OPERATIONAL CONTROL

Operations and activities associated with the significant environmental aspects are required to be identified. These activities must be planned, and an organization must:

- establish and maintain documented procedures to cover situations where their absence could lead to deviations from the environmental policy and the objectives and targets,
- stipulate criteria in the operational procedures, and
- establish and maintain procedures related to the environmental aspects and communicating those relevant procedures and requirements to suppliers and contractors

XVII. EMERGENCY PREPAREDNESS AND RESPONSE

- Procedures to identify potential for and respond to accidents and emergency situations, are required to be established and maintained.
- In addition, the emergency procedures must be reviewed and revised, when necessary, especially after an accident or emergency situation.
- Where practicable, it is required that these procedures are periodically tested through drills, exercises, etc.

XVIII. MONITORING AND MEASUREMENT

- Develop and maintain procedures to regularly monitor and measure performance against objectives and targets
- Maintain and document program for calibrating monitoring equipment
- Identify and investigate non-conformance and implement corrective and preventative action
- Establish and maintain program to conduct periodic internal audits
- The organization must also maintain a documented procedure for periodically evaluating compliance with relevant environmental laws and regulations

XIX. NONCONFORMANCE & CORRECTIVE AND PREVENTIVE ACTION

- Procedures for defining responsibility and authority for handling and investigating nonconformance, taking action to mitigate any environmental impacts, and for corrective and preventive action completion, are required to be established and maintained.
- Environmental incidents includes emission, chemical spills
- All environmental incidents require full evaluation of root cause, initial response, and identification and implementation of corrective and/or preventative action

XX. RECORDS

- Procedures for identification, maintenance, and disposition of environmental records are required to be established and maintained.
- The records must be legible, identifiable and traceable to the activity involved.
- The records must be stored/maintained so that they are readily retrievable and protected against damage, deterioration, or loss.
- Retention times must be established and recorded.
- Records must be maintained, as appropriate, to demonstrate conformance to the standard.

XXI. ENVIRONMENTAL MANAGEMENT SYSTEM AUDIT

- A program and procedures for conducting periodic environmental system audits are required to be established and maintained.

  The audit program/procedures must:
- determine whether the EMS conforms to requirements of the standard and has been properly implemented and maintained
- ensure that information on the audit results are provided to management

  The audit program/procedures must:
- be based on the environmental importance of the activity concerned and results of previous audits
- Cover audit scope, frequency, methodologies, and responsibilities and requirements for conducting audits, and reporting results.

XXII. MANAGEMENT REVIEW

Review is to involve the top management in the EMS continuous improvement process.

Conduct Annual (at least) Management Review of EMS to ensure:

- Its continuing suitability, adequacy and effectiveness
- Adequate information is collected to perform the management review

Address the need for changes to policy, environmental aspects, objectives, elements of the environmental management system.

XXIII. CONCLUSION

- EMS is serving as a tool to improve environmental performances and it is providingsystematic way of managing organization environmental affairs, also in terms of overall management structure its long terms impacts are bright in terms of products, services and processes on the environment and EMS is focusing on continuously improvement of the system.

REFERENCES

[1]. Cramer, J.S., Hartog, J., Jonker N., Van Praag, C.M., (2002). "Low Risk Aversion Encourages the Choice for Entrepreneurship: An Empirical Test of a Truism", Journal of Economic Behavior and Organization, 48 (1), 29-36

[2]. Hewitt-Dundas, N. (2006). "Resource and Capability Constraints to Innovation in Small and Large Plants", Small Business Economics, 26 (3), 257-277

[3]. Lowe, R.A. and Ziedonis, A.A. (2006). "Over-optimism and the Performance of Entrepreneurial Firms", Management Science, 52 (2), 173-186

[4]. Davidson, Ian. (2004), Employees: Business asset or legal liability? Internet Works,

[5]. Autumn 2004, Vol.86.

[6]. . Duane Sharp, (2003) " Call centre operations, Design operation and maintenance",

[7]. Digital Press.

[8]. . Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990), Perceived organisational

[9]. support and employee diligence, commitment, and innovation. Journal of Applied

[10]. Psychology, Vol.75. No.1. pp.51-59.

[11]. Berth,J.L.,C.S.Dyer, and E.G., Stassinopoulos,(2003), Space atmospheric and Terrestrial radiation envirounments ,IEEETrans.Nucl.Sci.Vol 50.No3.pp.466-482.

[12]. Cowely,S.W.H:1982,"The causes of convection in the Earth's Magnetosphere:A Review of Development During the IMS,Rev.Geophys.Space Phys.20,531-565.

[13]. Daly,E.J.,I.Daglis,Ed.,(2004),Outlook on space weather effects on space-crafts",NATO Science series:effect of space weather on Technology infrastructure, Kluwer Vol:176,pp.91-108.