



A Review Paper on Environmental Management System

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ABSTRACT :

Environment Management Systems (EMS) have accomplished an incredible overall enthusiasm because of the advantages they might acquire when effectively executed organizations. Adding to an Environmental Management System in an organization will build its proficiency in characteristic assets administration and lessen squanders and discharges. Likewise, it will mean cost sparing in the center future and change of the organization's open image. As a naturally mindful association, overseeing ecological issues systematically is imperative to us. Through the consistent improvement of our EMS we try to make our items and administrations more manageable. Keeping up our EMS to the CBEN Gold Award Standard will offer us some assistance with minimizing the negative effects and expand our positive effect on the earth. The main universally acknowledged regulation about Environmental Management Systems for a wide range of action is ISO 14001. This regulation is by a wide margin more stretched out than its option standard, EMAS. Nowadays, there is not a major weight towards executing an EMS, but there is a growing inclination towards their dynamic speculation.

keywords : EMS; ISO.

Introduction :

Environmental Management Systems:

An Environmental Management System (EMS) is a methodical methodology for joining vitality and natural objectives and needs, (for example, vitality use and administrative consistence) into routine operations. While some kind of true framework is inborn to any association that should meet vitality and ecological prerequisites as a major aspect of day by day operations, it is for the most part acknowledged as a profitable stride to formalize the methodology by reporting it. Not just does documentation of the framework guarantee consistency after some time and crosswise over workers, there is a developing assortment of proof showing that there is impressive worth in characterizing a precise way to deal with overseeing vitality and natural objectives.

It would be ideal if you take note of that, while this manual alludes to "Vitality and Environmental" in numerous areas, it is comprehended that an EMS incorporates a wide point of view, including the utilization of normal assets, for example, water, air and different vitality sources, and in addition the more customary ideas of waste era and transfer, contamination and utilization of HR. The US EPA characterizes an EMS as "a set [or system] of procedures and practices that empower an association to decrease

its ecological effects and build its working productivity." This emphasis on procedures and practices is basic to all EMSs, which are for the most part established on the "Arrangement, Do Check, Feedback" cycle¹ of ceaseless change (see Figure 1).



EMS Models

More than one model or reasonable structure for an EMS exists. Likely the most surely understood of EMS models is the ISO 14001 universal standard. Different models incorporate the accompanying:

- European Eco-Management and Audit Scheme (EMAS);



- Responsible Care model created by the American Substance Council (ACC);
- US Department of Justice (DOJ) "Seven Key Consistence Program Elements;" and
- EPA National Enforcement Investigation Center (NEIC) "Consistence Focu.

In the United States, the most generally acknowledged model is that put forward by the ISO 14001 standard. There are additionally varieties of the ISO 14001 model that have been produced for associations that don't wish to confirm to the ISO 14001 standard, for example, the DEP EMS for Colleges and Universities, and the National Biosolids Partnership EMS. As noted over, all EMS models depend on an "Arrangement, Do, Check, Feedback" cycle that is essentially worried with the procedure an association uses to fuse natural worries into routine operations and not the operations themselves. The ISO 14001 EMS Model According to the global standard, ISO 14001, an Environmental Management System (EMS) is "the part of the general administration framework that incorporates hierarchical structure, arranging exercises, obligations, hones, techniques, procedures, and assets for creating, executing, accomplishing, auditing and keeping up the natural strategy." While this is a more unpredictable definition than beforehand given, despite everything it infers the same cycle of "Plan, Do, Check, Feedback." The ISO 14001 EMS standard comprises of five segments, Environmental Policy, Planning, Implementation and Operations, Checking and Corrective Action, and Management Review, as exhibited in Figure 2 underneath.

The boxes shown in Figure 2 are considered to be the five major sections of the ISO 14001 EMS Model, and are described in the standard as follows:

Environmental Policy – Establishes and communicates an organization's position and commitment as it relates to energy and the environment.

Planning – Identifies energy and environmental issues and requirements, and defines the initiatives and resources needed to achieve the environmental policy and economic goals.

Implementation & Operations – Describes the procedures, programs and responsibilities necessary to implement the key initiatives to achieve goals.

Checking and Corrective Action – Regularly monitors and assesses the effectiveness of energy and environmental management activities.

Management Review – High-level evaluation of the management system as a whole to determine its overall effectiveness in terms of driving continual improvement and achieving business goals. The ISO 14001 Seventeen Elements The ISO 14001 standard then breaks the five major sections down into seventeen elements described below:

Environmental Policy – The policy drives the commitment of the municipality to maintain and potentially improve its environmental performance. By documenting and publicizing the policy, the municipality demonstrates a commitment to the management of environmental issues from the highest management levels.

Environmental Aspects – Environmental aspects are the municipal activities that have the potential to interact with the environment in some way, potentially posing a risk if they are not managed appropriately.

Legal and Other Requirements – The legal and other requirements are those requirements the municipality is expected to comply with on a continual basis. Besides legal requirements, these could be the expectations of the local community or other local municipalities. Municipal EMS Guidebook Section 2 Prepared by Five Winds International

Objectives and Targets – Objectives and targets form the goals of a municipality's EMS. Drawing on the information gained in the Aspects study, a municipality develops goals for improving its performance in regard to specific activities.

Environmental Management Programs – These programs define the methods a municipality will use to achieve its objectives and targets.

Structure and Responsibility – Much like an organizational chart, the structure and responsibility of the municipality defines the authority structure in place. The definition of responsibility takes it



another step further, defining who is responsible for what within municipal operations.

Training, Awareness & Competence – This element of an EMS defines what training and minimum competence levels are required to ensure that environmental risks are managed appropriately, who receives the training, and how often.

Communications – The communications element of an EMS defines how internal and external communications with respect to environmental issues are handled. This can be quite useful in regards to requests for information from the local community.

EMS Documentation – The documentation element defines the structure of the EMS itself. This is typically only needed if a full EMS is implemented.

Document Control – This element focuses on the maintenance and control of EMS documents required to maintain the EMS.

Operational Control – The operational control element focuses on the level of operation control that is applied to environmental risks within the municipality. Many municipalities find this element particularly useful in the documentation of standard operating procedures that have previously not been written down.

Emergency Preparedness and Response – This EMS element outlines the procedures by which the municipality responds to environmental emergencies, and the maintenance of a minimum level of preparedness.

Monitoring and Measurement – This element describes how a municipality monitors its environmental performance, what procedures are used to measure the appropriate data sources, and how often they are measured. **Nonconformance & Corrective and Preventative Action** – This EMS element outlines how a municipality investigates and corrects non-conformances.

Records – The EMS records element describes how the municipality handles and controls the larger scope of documents related to the EMS, such as training records, compliance reports, and letters to regulators.

EMS [internal] Audit – The auditing element of the EMS outlines how a municipality audits its environmental performance

Management Review – This component of the EMS depicts how the region arranges execution surveys by top administration and drives the procedure of constant change. Natural Management Systems in Municipalities Since its production in 1996, the assembling business has grasped the idea of Environmental Management Systems. However the ISO standard was not composed particularly for usage in assembling, or even only revenue driven organizations; it particularly utilizes "association" to infer any gathering of people that meet up for a particular reason under a particular authoritative structure. The advantages of the EMS approach – which will likewise be talked about in this segment – have prompted its application in different areas, for example, neighborhood governments, with comparative achievement. A few pilot thinks about have been appointed at the International, Federal and State levels to show this, and the confirmation is clear that regions can understand advantages in any event equivalent to those accomplished by business. Much like organizations, civil governments have an intricate arrangement of hierarchical administration and are liable to huge number of administrative prerequisites. Be that as it may, not at all like numerous organizations, regions normally have a wide extent of exercises that include power era, water and wastewater treatment, strong waste gathering and transfer, support of the nearby foundation, and authorization of various government, state and neighborhood codes. Further, a hefty portion of these operations associate straightforwardly with nature and have a high potential for noteworthy effect if an issue happens. Thus, an EMS might actually be more valuable for securing the earth in a civil setting than in a business set.

This area will manage you to instruments that will be valuable in assessing open doors for development inside of your district's operations. The devices are sorted out around a 24-Step EMS Implementation Plan for those districts expecting to advance with either a self-proclaimed or thirdparty accreditation to ISO 14001 EMS. For those regions taking part in halfway usage, the instruments can be utilized freely. Regions ought to analyze the strides and devices portrayed in the following segment of the Guidebook, to decide the apparatuses they



require. Attaches C-F give numerous helpful agendas, layout archives and assessment forms for districts.

The Four Phase EMS Implementation Plan

The Implementation Plan is organized around four key phases:

Phase 1: Policy Development and Management Commitment

Phase 2: Planning and Information Management

Phase 3: EMS Manual Preparation, Training and Implementation

Phase 4: Initiate Continuous Improvement of EMS

Every Phase in the Plan is separated into a progression of errands that guide regions to add to the different components of the EMS in a consecutive and orderly way. Every assignment is depicted quickly for the peruser in this segment, and exhibited completely as agendas in Annex C, D, E and F. The agendas diagram the inputs required for the assignment, the EMS devices that are given to finish it, a complete depiction of the undertaking itself, and the normal yield (or deliverable) the errand will create. Every agenda is promptly trailed by the EMS Tools gave to finish that particular Task. Due to their length, the EMS ISO 14001 Gap Assessment Protocol and Sample EMS Manual have been put in Annex G and H, separately. It is recommended that the Core Team allude to the Sample EMS Manual (accessible as a different, standalone record from PA DEP) intermittently keeping in mind the end goal to keep up point of view on how the different EMS components fit together into a general framework. The Sample EMS Manual is additionally a layout from which districts can add to their own EMS manual, if craved (Task 19)

Implementation Timeline

The initial three periods of the EMS Implementation Plan take around one year and speak to the majority of the exertion and expenses. This fits advantageously into common metropolitan planning cycles. Stage 4, which incorporates a self-review of the EMS and the principal EMS

administration audit cycle, regularly happens specifically after the Completion of the EMS. The second year then spotlights on refinement of the framework and, if craved, confirmation of the EMS by an outsider. Figure 4 shows the proposed plan and the estimated movement of the four Phases of EMS Implementation.



CONCLUSION

No political or institutional need is given to ecological administration; it barely shows up in neighborhood

- Little significance is given to ecological issues in arrangements for nearby indispensable advancement and particularly in the distribution of monetary and money related assets.
- The idea of ecological issues all in all is weak, which prompts a sectoral perspective of issues: contamination, wellbeing, common assets, essential sanitation, land administration.
- There is an irregularity between the natural effect of urbanization and the activities and endeavors of districts, organizations, or groups themselves for ecological restoration.
- Countries' laws and regulations are excessively restrictive and constrained for satisfactory nearby natural administration.
- The part of neighborhood nongovernmental performers in ecological administration is not obviously enough characterized.
- Citizen activity and support in nearby ecological administration are given low need.

In the range of administration limit they found that:



- Environmental administration is ineffectively organized at the intergovernmental and intersectoral levels and inside of neighborhood governments themselves, which causes scattering or duplication of endeavors.

- The variety of administrative and operational procurements at the national, state, and metropolitan levels causes clashes as a result of jurisdictional cover that hampers and constrains their powerful application by neighborhood governments.

- Participatory systems to connect with residents in natural administration are not adequately organized in the vast majority of the neighborhood legislatures of the area.

- There are few or no systems for settling debate emerging from ecological administration, both in the nearby government and in the group itself.

- The human, monetary, and mechanical assets to meet the prerequisites of effective nearby ecological administration are constrained.

- The specialized learning accessible to neighborhood government powers, authorities, or natives is inadequate or difficult to reach.

- Little or no significant data is accessible for neighborhood natural administration.

- Little thought is given to neighborhood ecological administration by worldwide and provincial financing organizations in the ventures they support on decentralization

References:

[1] www.afcee.brooks.af.mil/AFCEEfrm.html

[2] www.osha.gov

[3] www.google.co.in/EMS

[4] www.dep.state.pa.us