MODULE 3 ENVIRONMENTAL MANAGEMENT SYSTEM

3.1 ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS)

- An Environmental Management System (EMS) is a set of processes and practices that enable an organization to reduce its environmental impacts and increase its operating efficiency.
- An Environmental Management System (EMS) is a framework that helps an organization achieve its environmental goals through consistent review, evaluation, and improvement of its environmental performance.
- Some of the primary environmental issues that are affecting businesses today include pollution, waste disposal, water quality, and water supply issues, and climate change

3.1.1 ENVIRONMENTAL MANAGEMENT SYSTEM PROCESS

1. **Environmental policy**: Develop a statement of your organization's commitment to the environment. Use this policy as a framework for planning and action.
2. **Environmental aspects**: Identify environmental attributes of your products, activities and services. Determine those that could have significant impacts on the environment.
3. **Legal and other requirements**: Identify and ensure access to relevant laws and regulations (and other requirements to which your organization adheres).
4. **Objectives and targets**: Establish environmental goals for your organization, in line with your policy, environmental impacts, views of interested parties and other factors.
5. **Environmental management program**: Plan actions to achieve objectives and targets.
6. **Structure and responsibility**: Establish roles and responsibilities and provide resources.
7. **Training, awareness and competence**: Ensure that your employees are trained and capable of carrying out their environmental responsibilities.
8. **Communication**: Establish processes for internal and external communications on environmental management issues.
9. **EMS documentation**: Maintain information on your EMS and related documents.
10. **Document control**: Ensure effective management of procedures and other system documents.
11. **Operational control**: Identify, plan and manage your operations and activities in line with your policy, objectives and targets.
12. **Emergency preparedness and response**: Identify potential emergencies and develop procedures for preventing and responding to them

13. **Monitoring and measurement**: Monitor key activities and track performance.
14. **Nonconformance and corrective and preventive action**: Identify and correct problems and prevent recurrences.
15. **Records**: Keep adequate records of EMS performance.
16. **EMS audit**: Periodically verify that your EMS is operating as intended.
17. **Management review**: Periodically review your EMS with an eye to continualimprovement.

3.2 EMAS (ECO-MANAGEMENT AND AUDIT SCHEME)

- It is one of the Voluntary instruments of environmental protection, i.e., it positively motivates organizations to responsible approach and to improve their environmental performance beyond the legal requirements.
- Established by the European Union to detect and monitor the impacts of the activities of organizations on the environment and to publish information in the form of individual environmental statements
- EMAS is a proactive approach of the company to monitor, control and gradually reduce the impact of the organization's activities on the environment.
- It is designed for organizations functioning in the private sector (joint stock companies, limited liability companies, etc.) as well as for organizations of state and public administration (ministries, municipalities, etc.) or its parts (producing units, remote workplaces).
- EMAS system is one of two ways that an organization can use to implement the EMS.
- The second tool used to implement the environmental management system is the ISO.Both ways are similar to each other in many parts - environmental policy, continuous improvement, objectives and target values, programs, the implementation of the system and its operation, monitoring, and management review
- EMAS, however, extends the ISO 14001 system, especially in terms of transparency when organizations with an established system according to EMAS are obliged to publish environmental statements and hold open discussions with the public and other interested parties

3.3 ISO 14000

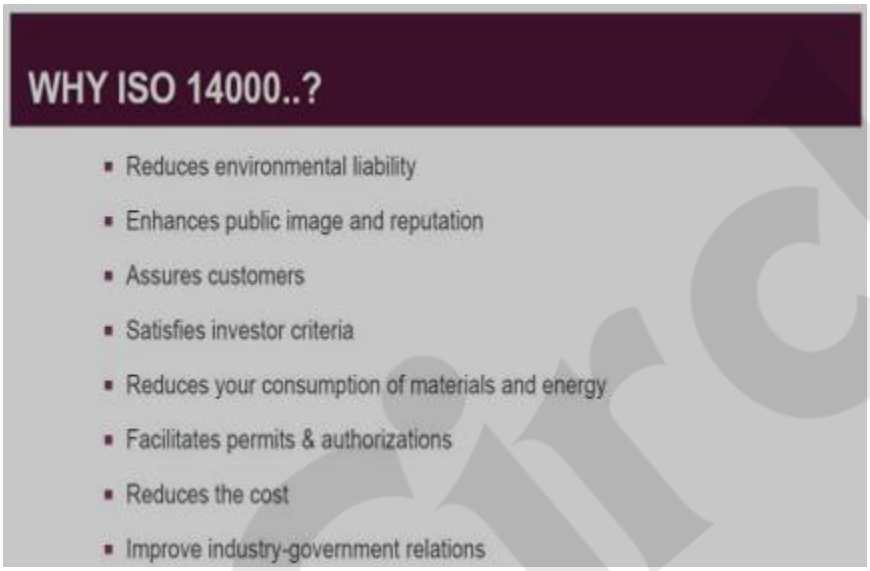
1. ISO 14000 is the international standard that specifies requirements for an effective environmental management system (EMS).
2. The primary objective of the ISO 14000 series of standards is *to promote effective environmental management systems in organizations*. It provides a framework that an organization can follow, rather than establishing environmental performance requirements.
3. The ISO 14000 family includes most notably the ISO 14001 standard, which represents the core set of standards used by organizations for designing and implementing an effective environmental management system (EMS).
4. Other standards in this series include ISO 14004, which gives additional guidelines for a good EMS and standards that are more specialized dealing with specific aspects of environmental management.

3.3.1 ISO 14001 requires an organization to:

1. Develop an **environmental policy** with a commitment to compliance*;*
2. Have a procedure for identifying and having access to **environmental laws and regulations**;
3. Set **objectives and targets** that are in line with its environmental policy (which includes a commitment to compliance);
4. Establish **operational control procedures**;
5. Establish procedures for **emergency preparedness and response**;
6. Establish a procedure for periodically **evaluating compliance**

3.3.2 ISO 14001 requires an organization to:

- Environmental policy
- Environmental laws and regulations;
- Objectives and targets
- Operational control procedures;
- Emergency preparedness and response;
- Evaluating compliance



Certification of EMS ISO 14001 has the following benefits to companies

- Prove that its activities have been evaluated and accepted by an accredited, independent third party.
- It shows that an external 'stamp' of approval of the EMS has been given and that, the organization's commitment to improving environmental performance is valid
- Shows commitment to the protection of the Environment. Possibly, the greatest positive impact to the environment will be in the reduction of hazardous waste
- This would apply to reduction, reuse, or recycling, all of which maximize natural resources.There is thus, a conservation of other natural resources in the process.
- Gives new organizations more chance with regulators that the written

documentation necessary to demonstrate compliance with the regulations will be abide by.

- Overall, relations with regulators would improve after ISO 14001 certification. 'The agency will know the certified organization care for the environment and has systems in place even before visiting the operation'. This positive relation is extremely valuable and would help foster a better working relationship.
- It levels the playing field of international trade bringing more competitors to the scene. These means companies certified to ISO 14001 have market access all over the world.
- Insurance companies these days find it easier to transact business with companies that have effective EMS like ISO 14001 as they view such a company as having limited liability. Investors these days also try to invest in environment-friendly companies.

3.4 BENEFITS OF EMS

- Improved environmental performance
- Enhanced compliance.
- Prevention of pollution.
- Resource conservation.
- New customers/markets.
- Increased efficiency/reduced costs.
- Enhanced employee morale.
- Fewer accidents.
- Enhanced image with the public, regulators, lenders, and investors; i.e. stakeholders.

Key Barriers to EMS Implementation

- Financial Constraints
- Lack of Expertise and Knowledge
- Resistance to Change
- Limited Leadership Commitment
- Insufficient Resources
- Complex Regulatory Environment

- Lack of Tangible Benefits
- Supply Chain and Stakeholder Challenges
- Inadequate Communication
- Technological Barriers

3.5 CONCEPT OF CONTINUAL IMPROVEMENT AND POLLUTIONPREVENTION

Continual Improvement is an important aspect of any EMS and ISO 14001.

- Pollution prevention is generally defined as "the use of processes, practices, materials, products or energy that avoid or minimize the creation of pollutants or wastes at the source".
- Organizations that implement continuous improvement achieve this by making small,

  gradual improvements over time.
- Pollution prevention also includes practices that reduce the use of energy, water, or other resources through conservation or more efficient use.
- Where pollution prevention is not feasible, the EMS should include options for recycling,treatment, and disposal, considered in that order.

3.5.1 CONTINUOUS IMPROVEMENT AIMS TO:

- Increase Efficiency
- Increase Quality
- Reduce Costs

3.5.2 POLLUTION PREVENTION TECHNIQUES AND PRACTICES FOCUS ON

- Substances of concern
- Materials and feedstock substitution
- Operating efficiencies
- On-site reuse and recycling
- Training
- Purchasing practices
- Product design
- Equipment modifications
- Product reformulation

- Process changes
- Clean production
- Avoidance of cross-media transfer of pollutants or waste
- Life-cycle assessment
- Employee awareness of environmental issues and responsibilities.
- Reduced liabilities.
- Competitive advantages.

1) Materials and feedstock substitution are methods of source elimination.

- Polluting materials in a production process or embedded in a product are replaced with lesspolluting or nonpolluting substances
- Opportunities for materials and feedstock substitution include:

- Painting applications
- Parts cleaning
- Metal Finishing
- Printing operations
- Building and grounds maintenance

2) Operating efficiencies and training are examples of how normal parts of good operation canprovide effective ways to prevent pollution.

Examples include

- Changing production schedules to minimize equipment and feedstock change overs
- Improving maintenance schedules
- Segregating by-products at the source
- Training staff to improve material handling and recognize opportunities

3) Product design and reformulation includes methods for preventing pollution associated withthe entire life cycle.

- Addressing environmental concerns at an early stage can avoid environmental impacts

  throughout the product life cycle in a cost-effective manner.
- Results of redesigning or reformulating a product include

- Reducing toxicity of a product
- Reducing waste material

- ❖ Extending the life of a product
- ❖ Extending the life of the materials used
- ❖ Reducing energy and material intensity needed to produce, use and dispose of the product

4) Equipment modifications and process changes involve new technologies or approaches to existing operating systems processes and practices to improve production efficiencies and reducepollution and waste.

- ❖ An example is mechanical stripping instead of using solvents to remove paint and varnish

5) The Value of Waste

- ⧫ Waste can also be viewed as a loss of valuable process materials that could have economicand environmental benefits if reused or recycled.

The following approaches reflect this perspective on the value of waste.

- ⧫ **On-site reuse and recycling** is considered pollution prevention because it occurs at thesame place as the original activity.
- ⧫ **Reuse** means using materials again in their original form or in new applications.
- ⧫ **Recycling** extends the effective life of resources. Environmentally sound recycling isusually preferable to end-of-pipe solutions.
- ⧫ Raw materials, chemicals and treated and untreated wastewater are examples of materialsthat could be reused or recycled.
- ⧫ Some examples of reuse and recycling are
- ❖ Recovering metals by ion exchange or reverse osmosis
- ❖ Recycling cooling water
- ❖ Reusing trim and cuttings from plastic moulding in on-site production rather than takingthem for off-site disposal

3.6 ENVIRONMENTAL POLICY

What is an environmental policy?

- ⧫ An environmental policy is a statement about an organization's environmental position andvalues
- ⧫ The ISO 14001 standard states that an environmental policy is the organization's overall environmental performance intentions and direction

formally expressed by top management

- An environmental policy is usually published as a written statement, expressing the

  commitment of the senior management to improving appropriate environmentalperformance.

- Environmental policy is the commitment of an organization or government to the laws, regulations, and other policy mechanisms concerning environmental issues.
- These issues generally include air and water pollution, waste management, ecosystem management, maintenance of biodiversity, the protection of natural resources, wildlife, andendangered species.
- The ISO 14001 standard is probably the best reference standard for the development of an environmental policy

  Environmental policy must be:
  - appropriate to the organization;
  - include a commitment to continual improvement and prevention of pollution;
  - include a commitment to comply with relevant legal and other requirements; and,
  - provide the framework for setting and reviewing environmental objectives and targets

3.6.1 BENEFITS OF DEVELOPING AN ENVIRONMENTAL POLICY

- An organization can publicly advertise that it has considered its environmental performance and has adopted best practice or is working towards improving its environmental performance.
- It is all relative to the organization and the type of industry but the environmental policy can advertise the environmental status and environmental objectives of the organization toall stakeholders.
- Current and potential clients can read the statement and are able to determine whether theywould like to continue or start business with the organization. ***It also can provide clear direction to all stakeholders about the***

organization's environmental values.

3.6.2 Who should develop an environmental policy?

- A senior manager or managing team should endorse the environmental policy but notnecessarily be directly responsible for developing the policy.
- Should appoint someone talented, familiar with the organization and who has the ability ofwriting interesting factual statements.
- Choose someone which can inspire and communicate the true environmental policy of theorganization.

3.6.3 What is the usual procedure for maintaining an environmental policy?

- Similar to an environmental management system environmental policy should be regularlybe reviewed
- When there has been change or change is planned, or when there has been a significantperformance issue the environmental policy should be reviewed.
- Otherwise, more general reviews should occur periodically (e.g. annually).

3.6.4 What should be included in an environmental policy?

- The ISO 14001 standard is probably the best reference standard for the development of anenvironmental policy.

In summary, an environmental policy must be

- Appropriate to the organization;
- Include a commitment for continual improvement and prevention of pollution;
- Include a commitment to comply to relevant legal and other requirements; and,
- Provide the framework for setting and reviewing environmental objectives and targets.
- Understand whether the organization presents a direct environmental risk to theiroperations;

3.7 INITIAL ENVIRONMENTAL REVIEW

- The first step in creating an EMS is to perform an Initial Environmental Review.
- This process will enable organization to understand what aspects of the

organization havea significant environmental impact.

- This tells organization where they are and creates a road map for the organization.
- The initial environmental review is the **starting point** for a good environmentalmanagement system.
- The Environmental Review is an **initial assessment** to help to create an EMS.
- The Environmental Audit **assesses the performance** of the

organizations' EMS.There are four main areas

- ❖ Review previous environmental issues
- ❖ Consider any regulations which have operational impact
- ❖ Identify and evaluate possible environmental issues in organization.
- ❖ Outline current operations and how it is managed; also consider indirect impacts

Initial Environmental Review enables organization to:

- Identify how existing site operations have an environmental impact – eg. the impact of normal operating conditions, abnormal conditions, and emergency situations
- establish which of these impacts are significant and need improvement by settingobjectives and targets
- identify breaches or potential breaches of environmental legislation
- identify relevant EMS documentation which needs to be put in place
- quantify emissions, discharges, and material and utility use
- identify opportunities for improving performance and minimizing waste
- evaluate previous emergencies and accidents
- develop your environmental policy
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3.7.1 BENEFITS OF AN INITIAL ENVIRONMENTAL REVIEW

Helps determine the organization's environmental position, and should include

- ❖ Environmental statutory and regulatory requirements
- ❖ Recognize items/areas with environmental impact
- ❖ Environmental Performance Criteria
- ❖ Feedback of previous experiences
- ❖ Opportunities for improvement in-house as well as external (contractors, vendors,

etc.,)

3.8 ENVIRONMENTAL ASPECT AND IMPACT ANALYSIS

- Identification and evaluation of significant environmental aspects,especially in the planning phase, is the most fundamental part of EMS.
- Understanding the environmental aspects and impacts is one of the key success factors ofimplementing an ISO 14001 EMS.

The following definitions used in ISO 14001 provide a clear understanding of the terms.

- **Environmental Aspect:** Element of an organization's activities, products, or services thatcan interact with the environment.
- **Environmental Impact:** Any change to the environment, whether adverse or beneficial,wholly or partially resulting from an organization's activities

The organization needs to establish and maintain procedures to identify the environmental aspectsthat it can control and have influence over. Direct and indirect aspects need to be distinguished.

Direct aspects result directly from facility operations, such as raw materials used in production.

Indirect aspects can only be indirectly connected to a facility operation, such as aspects relatedto the production of raw materials that are purchased from a supplier.

- The term ―aspect‖ is neutral. Environmental aspects can be either:
- Positive (such as manufacturing a product out of recycled materials).
- Negative (such as creating toxic materials

3.9 LEGAL AND OTHER REQUIREMENTS

Almost all organizations implementing ISO 14001 are aware that legal requirements are thefoundation and basic requirement of ISO 14001

Some of the important legislations for environment protection are as follows:

- The Environment (Protection) Act, 1986
- The National Green Tribunal Act, 2010
- The Air (Prevention and Control of Pollution) Act, 1981
- The Water (Prevention and Control of Pollution) Act, 1974
- The Environment Protection Act, 1986
- The Hazardous Waste Management

Regulations, etc.Legal requirements include:

- National, regional and local requirements.
- Standards in locations where an organization sells products /services.
- Permit conditions.
- Regulatory obligations.

Other requirements might include (for example):

- Organization-specific codes.
- International Chamber of Commerce (ICC) Charter for Sustainable Development.

3.10 OBJECTIVES AND TARGETS

Setting objectives requires an analysis of the exposure to different environmental aspects:

- Environmental aspects which have high public priority and to which the organizationcontributes heavily. Here environmental objectives should be set.
- Environmental aspects which have low public priority and to which the organizationcontributes heavily.
- Environmental aspects which have high public priority and to which the organization hasa low contribution.

How to Establish Objectives for Environmental Management

- "Objectives and targets help an organization translate purpose into action". An attemptshould be made to connect these goals with other existing strategic plans.

The best objectives are referred to as S.M.A.R.T. objectives

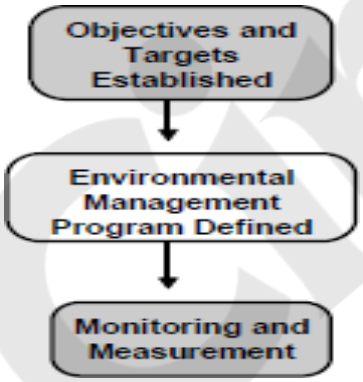
- specific,
- measurable,

- achievable,
- realistic and
- time-based,

and this way of creating objectives makes a target an integral part of the objective.

3.11 ENVIRONMENTAL MANAGEMENT PROGRAMS

- An Environmental Management Program is the roadmap the organization will follow toachieve its environmental objectives and targets.
- It is a document that provides the details of what must be done, by whom, how, and when,for each of the defined objectives and targets.
- The objectives and targets themselves must be assigned priorities at the start.



When devising the environmental program:

- Management must designate responsibilityfor achieving the objectives and targets at each function and level within the organization.
- Management must provide the means for fulfilling the objectives and targets. A time frame in which objectives and targets will be achieved needs to be established.

The environmental management program should be integrated into the company's overall strategic plan. Within the spirit of the EMS, environmental management programs should be reviewed periodically and revised regularly to reflect changes in the company's objectives and targets. The program should focus on:

1. **Air Emissions:** The program includes performance standards for boilers, emergency generators, and incinerators. This program also encourages and

supports alternative transportation including bus and carpools.

2. **Energy Management:** This program seeks to reduce electricity consumption associated with laboratory, utility, office, and outdoor operations and support the agency-wide effortsto reduce campus building energy intensity and increase usage of renewable energy.
3. **Green Purchasing:** The program encourages the purchase of recycled content materials, energy-efficient equipment, alternative fueled vehicles, bio-based products, environmentally preferable products, and non-ozone-depleting substances.
4. **Hazardous Materials Management:** The program provides criteria for the safe and environmentally sound storage, handling, transportation and disposition of hazardous materials used in laboratory research, support and maintenance operations, and construction activities
5. **Hazardous Waste Management:** This program provides for the management of hazardous wastes to ensure that such wastes are identified, accumulated, stored, transported, treated, and disposed or recycled in an environmentally sound manner
6. **Pesticides:** This program follows integrated pest management (IPM) principles when controlling pests in the animal facilities, inside campus buildings, and on campus grounds through limited pesticide application in a manner that is effective yet safe for the environment, personnel, and research activities
7. **Solid Waste Management:** Program ensures that solid wastes are identified, classified, collected, transported, stored, recycled, treated and/or disposed of safely and in a manner protective of human health and the environment. Maximization of the quantity of materialdiverted from the landfill, either by recycling, reuse, or reduction in quantities used, is a primary objective
8. **Stormwater Management:** The program focuses on reducing the potential for outdoorpetroleum and chemical spills, and minimizing the impact of construction projects on the storm water conveyance system.

9. **Wastewater:** Program reduces the potential for pollutants to enter the sanitary sewer system through effective pretreatment, source reduction, proper chemical disposal, and other wastewater management programs
10. **Water Consumption:** Program seeks to reduce water consumption associated with laboratory, utility, facility, and domestic operations.

3.12 STRUCTURE AND RESPONSIBILITY

- For EMS to be effective, roles and responsibilities must be clearly defined andcommunicated. In an organization, the commitment of all employees is needed.
- Top management plays a key role by providing the resources needed to ensure that theEMS is implemented effectively
- Top management should appoint a management representative. This representative:
    1. Ensures that the EMS is established and implemented as planned.
    2. Regularly report on its performance.
    3. Works with others to modify and improve the EMS as needed.
    4. Coordinates actions and projects for the continuous improvement process

3.13 TRAINING AWARENESS AND COMPETENCE COMMUNICATION

- EMS training is intended "to explain the importance of the EMS to staff, and toexplain their responsibilities for EMS operations".
- Passive management support is often caused by management's ignorance about the EMS.

Competence:

- The first step is to identify what skills and abilities are required for a person to perform thejob function to avoid the potentially significant impacts.
- This competence can be gained in the form of outside education, training, or experience.

Training:

- After identifying what competencies are required for the processes to avoid

potential significant environmental impacts, you need to find people with these competencies to fillthese positions.

- Of course, in reality, there will often be a choice of candidates who have many of the required competencies, but not all of them.

- This is where training comes into place, especially when you are first implementing your environmental management system

Training of all employees is very important because every employee:

- Can have potential impacts on the environment through his or her daily activities.
- Can be a useful resource for generating ideas about establishing operational control for aprocess, defining environmental aspects, or defining structural responsibilities.

Training must take place when:

- New employees are hired.
- A change in job descriptions takes place.
- The corrective action process notes the failure to follow instructions.
- New procedures are introduced or already existing procedures are altered.
- EMS aspects/objectives/targets have changed.

Steps to develop a training program

Step 1: Assessment of training needs & requirements.

Step 2: Defining training objectives.

Step 3: Selecting suitable methods and materials.

Step 4: Preparing training plan.

Step 5: Conducting training.

Step 6: Tracking of training (and maintaining records).

Step 7: Evaluating training effectiveness.

Step 8: Improving the training program

Awareness:

Even those who have the desired competencies need to be made aware of how their tasks can leadto the identified potential environmental impacts.

The requirements of ISO 14001 separate the need for awareness into four distinct areas:

- Conforming to the environmental policy and procedures

- Significant environmental aspects and potential impacts
- Roles and responsibilities to achieve conformity
- Potential consequences of departure from procedures

3.14 COMMUNICATION

Communication is the glue that holds together the elements of an environmental management system. Effective environmental management requires effective communication.

Communications will help:

- motivate the workforce;
- explain the environmental policy (both internally and externally) and how it relatesto the overall business vision/strategy;
- ensure understanding of roles and expectations;
- demonstrate management commitment;
- monitor performance; and
- Identify potential system improvements. An effective EMS should include procedures for:
- communicating internally (between levels and functions), and
- Soliciting, receiving, documenting and responding to external communications.Internal and External Communication
- An effective EMS requires this information to be communicated both internally and externally.
- Internal communication is the communication within a facility or organization that is directly related to the EMS. It is required to establish communications on and between allrelevant levels of functions within the organization.

Internal communication will:

- Motivate the workforce.
- Gain acceptance for management's plans and efforts.

- Explain the environmental policy and the EMS and how they relate to the overall organizational vision
- Ensure understanding of roles and expectations.
- Demonstrate management commitment.
- Monitor and evaluate performance.
- Identify potential system improvements.

External communication is the communication between the organization and interested partiesoutside the organization. There are numerous benefits resulting from effective communications.

- Effective external communication will:
- Demonstrate management ‘s commitment to the environment.
- Make others aware of the organization’s environmental policy and commitment toenvironmental responsibility.

3.15 DOCUMENTATION AND DOCUMENT CONTROL

EMS documentation consists of:

- The environmental policy.
- The organizational structure and key responsibilities.
- A description or summary of how an organization satisfies EMS requirements
- System-level procedures
- Activity or process-specific procedures/work instructions
- Other EMS-related documents
- Documents are an important element of an environmental management system (EMS) asthey provide written evidence of procedures, records and instructions.
- They can also provide a history of the EMS, enabling organization to check whetherimprovements are continuing to being made.

<u>Documents likely to be part of EMS include:</u>

- An environmental policy
- Objectives and targets
- Structure and responsibilities
- Information on how the EMS operates
- How documents and operational procedures are controlled

- Monitoring and measurement records
- Corrective and preventive action

3.16 OPERATIONAL CONTROL

Operational controls are required to control significant environmental aspects and impacts, but also to keep track of legal and other requirements, objectives, and targets as well as environmental policy. Effective operational planning and control lie at the heart of every effective EMS (EnvironmentalManagement System).

The operation control defined must take into consideration:

- create controls in line with its environmental requirements to ensure that the design anddevelopment process for the product or service considers the life cycle stage
- define the environmental requirements for the procurement of products and services
- communicate all relevant environmental requirements to external providers which includecontractors
- consider the need to provide information in regards to the end-of-life treatment of productsand services with consideration in, transportation, delivery, use, and final disposal.
- maintain detailed documentation to ensure that the processes have been

carried out as planned.

3.17 MONITORING AND MEASUREMENT

- An EMS without effective monitoring and measurement processes is like driving at night without the headlights on you know that you are moving but you can't tell where you are going Monitoring and measurement enables an organization to:
- Evaluate environmental performance.
- Analyze root causes of problems.
- Assess compliance with legal requirements.
- Identify areas requiring corrective action.
- Improve performance and increase efficiency.
- Monitoring helps organizations to manage business better.
- An EMS without an effective monitoring and measurement program is like driving at nightwithout the headlights on — you know that you are moving but you can't tell where you are going!

Monitoring and measurement enables you to:

- gauge your environmental performance;
- analyze root causes of problems;
- identify areas where corrective action is needed; and,
- improve performance

Organizations should develop procedures to

- monitor key characteristics of operations and activities that can have significantenvironmental impacts;
- track performance (including how well the organization meet objectives and targets);
- calibrate and maintain monitoring equipment; and,
- through internal audits, periodically evaluate your compliance with applicable laws andregulations

3.18 MANAGEMENT REVIEW

- Management review is intended to ensure that the environmental management system is healthy and to look for places where improvement can happen.
- Management reviews also offer a great opportunity to keep EMS efficient and cost-effective.
- The management review process in ISO 14001 is the same as the internal environmental audit for EMAS.
- Management itself determines the intervals in which it performs reviews. Generally, the scope of the review should be comprehensive, though not all elements of an EMS need tobe reviewed at once.

Top management must periodically review the EMS to:

- Ensure its continuing suitability, adequacy, and effectiveness.
- Address possible needs for changes to the environmental policy, objectives and targets,and other elements of the EMS.
- Identify opportunities for continual improvement.

Other objectives of the management review are to:

- Review regulatory compliance and determine the causes of non-compliance.
- Determine whether or not operational controls, procedures, corrective actions, preventive measures, and continuous improvement efforts were able to improve the environmental performance of the organization.
- Determine process improvements due to EMS measures.
- Determine if operational areas are existing that could be improved with EMS measures.
- Ensure understanding of roles and expectations.
- Demonstrate management commitment.
- Monitor and evaluate performance.
- Identify potential system improvements.