

Module - 4

Environmental Audit :- Environmental management system audits as per ISO 19011 - Roles and qualifications of auditors - Environmental performance indicators & their evaluation - Non conformance - corrective and preventive action - Compliance audit - waste audits and the waste minimization planning - Environmental statement (Statement) - Due diligence audit.

MODULE - 4 :- ENVIRONMENTAL AUDIT

What is Audit..?

Systematic Documentation process towards obtaining Evidence and objective Evaluation for determination of Compliance of framed criteria's.

Rationale of Audit:-

- Opportunities towards improvisation
- Application of best practices
- Corrective and proactive action implementation.

Principles of Auditing:-

- | | |
|-----------------------|----------------------------|
| ⊗ Ethics | ⊗ Integrity |
| ⊗ Independence | ⊗ Due professional care |
| ⊗ Objectivity | ⊗ Evidence based approach. |
| ⊗ Impartiality. | ⊗ Risk based approach |
| (a) Fair presentation | ⊗ Confidentiality. |

What is Environmental Audit..?

Environment Audit is process of objectively obtaining and Evaluating Evidence to determine status quo towards Environmental quality. It Evaluates and quantifies Environmental performance

It also serves to determine if pre-defined goals are met or not. with respect to Environmental pollution prevention and control.

Example:

- * Quantity of wastewater generated and water Conservation practice in place
- * Electricity Bills and Renewable Energy setup in place.

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An Environmental Audit provides an assessment of the environmental performance of a business or organization. The audit reveals details about the activities of a company and its compliance with environmental regulations. Audit information is provided to the management.

Environmental Audit process/steps :-

The Environmental Audit process includes the following steps as a minimum:

- a) planning the audits, including activities to be conducted and responsibilities for each activity
- b) Review the Company's Environmental protection policy and the applicable requirements, federal, state and local requirements.
- c) Assessment of the organization, its management and equipment.
- d) Gather data and relevant information
- e) Evaluate overall performance
- f) Identify areas needing performance
- g) Report findings to management.

→ **Who is involved in audit -- ?**

Client - (sponsor(s)) person/organization with the authority to request the audit

Auditee - Organization and people being audited or collectively called auditee

Audit team - ^{lead} Auditor and team member who is going to audit an auditee

Facility management - There are those responsible for receiving + initiating action on Audit results

Facility supervisor & employees - There are those who cooperate the audit by providing information as requested by Auditor.

Types of Environmental Audit

There are four main classifications of Environmental Audit

- * EMS Audit (Environmental management system Audit)
- * Compliance Audit
- * Due-Diligence Audit
- * ~~Waste~~ Audit.

a) EMS Audit:-

- * process of objectively obtaining and evaluating evidence to determine whether an organization's EMS is working as intended.
- * It is an Audit not for merely for compliance but for certification.
- * Certification of Audit is done by Third party registrars.

b) Compliance Audit:-

Restricted to checking compliance of the audit entity with respect to policies/laws/rules/regulations framed by the parliament/state legislature.

In this Audit, it will check compliance ~~with~~

- a) with applicable regulations with respect to type of industry
- b) with regulatory Benchmarks of Environment
- c) with organizational norms such as MOEF & CCE
- d) With Norms of the Enterprise such as company policy
- e) With laws of the nation such as Act.

c) Due-Diligence Audit +

Due diligence is an investigation (or) audit of a potential investment (or) product to confirm all facts, such as reviewing all financial records, plus anything else deemed material.

It refers to the care a reasonable person should take before entering into an agreement with another party.

Unlike a statutory audit, there is no defined law/process by which the due diligence has to be conducted, it has evolved by practice and requirements of the transaction i.e., formal process (based on interviews, documents etc) ~~and~~ (or) informal process (based on discussion, meeting with key persons etc.)

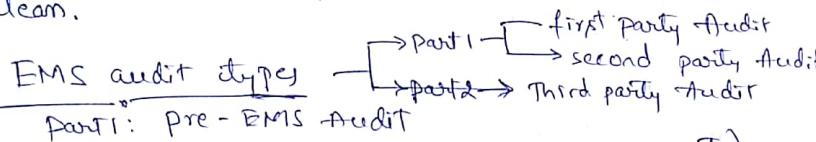
d) Waste Audit +

+ waste Audit helps us understand, determine the quantity and quality of waste produced by an industry/Enterprise. This is methodological process achieved through ~~and~~ Compliance audit, performance Audit & financial audit.

- o objective of waste Audit is to determine type of waste
- o objective of waste Audit is to determine the type and quantity of waste generated
- o To determine how effective current waste management strategy.
- o To constantly improve by identifying areas where your organization's waste management reduction practices actually can occur.

EMS Audit As per ISO 19011 standard

- * EMS Audit is process of objectively obtaining and Evaluating Evidence to determine whether an organization EMS is working as intended.
- * It's not merely a compliance Audit, but for certification.
- * Cert certification is done by accredited, third party registrars and done by those with EMS auditing Training / Experience.
- * Self declaration of an organization does not confirm the efficient EMS system whereas EMS certification as per ISO 19011 Guidance and principles will confirm that a company or organization has more efficient EMS Team.

1) 1st party Audit (self Assessment)

- * This is simply an internal audit.
- * Conducted by the organization itself.
- * Conducted to assessing confromity, Evaluating Effectiveness & identifying areas that could be improved.
- * This can be done as preparation for a 3rd party Audit.
- * first party audit can never result in ISO certification.

2) Second party Audit

- * This Audit is also same as 1st party Audit by Audit is conducted by interested parties outside organization.
- * This Audit also can never result in ISO certification.

Part-2: EMS Audit ~~part~~

↳ Third party Audit - certification

② Third party audits are done by independent organizations that have no vested (or) conflict of interest in the organization being audited.

③ Only Third party Audit can be used to get ISO certified. Third-party Auditor may also result in other types of registration, recognition (or) licensing.

④ EMS Audit is done by Trained (or) Experienced professional.

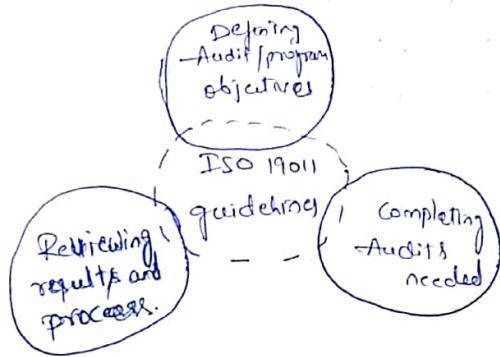
Guidelines of Auditing management systems

a) Audit objectives / program objectives

→ whether the EMS has been implemented and maintained

→ whether the EMS meets industry norms and the principles of due diligence

→ Identify opportunities for improving the EMS



b) Completing the audits needed

- ④ planning and reviewing internal documents
- ④ collecting and verifying audit evidence
- ④ Generating findings and preparing reports
- ④ communicating findings

c) Reviewing the results and process

- ④ Agreeing results and trends
- ④ ~~Conclusion~~ concluding conclusion regarding the conformance of the audited processes to ISO requirements
- ④ Statements regarding the suitability of a process to achieve objectives
- ④ Comments regarding the effective implementation of a process
- ④ ~~Suggestions~~ Suggestions for consideration regarding possibilities for improvement.

Overview of an Audit process

- a) prepare detailed plans for each audit
 - b) Execute scheduling and Execution of each audit
 - c) Report audit results including conclusions and recommendations.
 - d) corrective actions if needed
 - e) follow-up to ensure corrective actions are effective.
-
- a) prepare detailed plans for audit
 - Define audit objective
 - Define audit scope
 - Define audit resources
 - Define audit criteria
 - prepare and distribute an audit notification to auditee
 - Gather and understand relevant documents
 - prepare work plan.
 - b) making an Audit schedule for its Execution.
 - List main activities (processes)
 - List departments involved with the QMS.
 - Decide what activities to audit in which department
 - Be sure to include quality-relevant supporting activities
 - Be sure to include ISO system-level activities
 - check to ensure coverage of all pertinent activities
 - Assign individuals or teams to perform audits.

c) Report Audit results including conclusions and recommendations

- Conclusion Report regarding the Conformance of the audited process to ISO requirements
- Statement regarding the suitability of a process to achieve objectives
- Comments regarding the Effective implementation of a process
- Suggestions

d) Corrective actions if needed

- Suggestions for consideration regarding possibilities for improvement.

e) follow-up to ensure corrections are effective.

- checking ~~so~~ improvements suggested are implemented effectively.

Audit approaches :-

- + Horizontal Audit
- + Vertical Audit
- + Combination of ~~all~~ of the above.

Horizontal Audit:-

+ A horizontal Audit is when ~~an~~ Auditor audits a single process across many departments in the organization.

+ It will be best suited if ~~organization~~ ^{Audit as} followed up to ensure that a corrective action is effectively implemented.

+ One limitation of this Audit is that it is difficult

to see the linkages between processes. These critical linkages between processes, which can cause problems and highlight great opportunities for improvement, can easily be overlooked.

Vertical Audit

- ③ A Vertical audit is ~~performed~~ when Auditor audits all the processes used by the department.
- ④ This ^{Audit} is done for each department separately and do a review of different processes such as documentation process, Training process, records retention etc.,
- ⑤ With this type of audit it is much easier to determine ~~of~~ the linkages between different processes ~~used~~ of department and auditor can highlight great opportunities for improvement.

(V.V.I)

ROLES AND RESPONSIBILITIES OF AUDITOR

A Auditor may be a) internal Auditor

 a) one who performs first party Audit

b) External Auditor

 one who performs second & third party Audit

Role of Auditor:-

Environmental auditor ~~has~~ has to regularly ~~and~~ audit all Environmental policies and procedures. This ~~is~~ involves working with an audit team and with staff to get a good picture of environmental compliance being handled.

Responsibility of Auditor:-

* Selecting and managing Audit Team

- * Reviewing the operations of organization being audited & determine how Environmental issues are being handled.
- * Gathering data on the business operations through on-site inspections, document reviews, staff interviews & other methods.
- * Check ~~business~~ records for governmental permits and requirements, safety standards, maintenance and inventory control measures.
- * Review
 - a) Emergency preparedness and response procedures
 - b) Environmental management programs
 - c) Waste management efforts
 - d) Employee training procedures and programs
 - e) Work Environment for compliance with government and corporate standards.
- * Write and complete final audit report including
 - a) result of an audit
 - b) Recommendation for changes & improvement
- * Present Audit findings to the organization's managers and directors.
- * Assist in the development of an Environmental management plan.
- * Follow up to a future time to ensure improvements and recommendations have been successfully implemented.

NOTE: External auditors do the same thing as internal auditors but they will be the final auditors which lead to the certification if they will also ~~corrective actions~~ suggest corrective actions.

Qualification of Auditor are ✓ [Knowledge, skill, eligibility]

Auditor should have knowledge & skill in

Environmental Management Methods and Techniques

a) Environmental Science and Technology

b) Technical and Environmental Aspects of operations

c) Relevant requirements of Environmental law, Regulations and related documents.

x EMS standards and standards against which the Audit may be conducted.

b → Audit procedures, processes and Techniques.

Eligibility:-

Parameter:-	Eligibility of Auditor
Education	Degree in Engg (a) Equivalent (or) Post graduate in Degree in Science
Total work experience	At least 4 years
Work Experience in management Environmental Engineering	Atleast Two years of the Total four years
Auditor Training	40 hour of auditor training for EMS
Audit Experience	Four complete audits for a total of at least 15 days of audit experience as an auditor-in-training under the direction and guidance of an auditor.

ENVIRONMENTAL PERFORMANCE EVALUATION:-

An internal

" Environmental performance Evaluation is internal management process that provides information to facilitate management decisions regarding organization's Environmental Performance".

- * Environmental performance evaluation process enables continuous management of reliable & verifiable information which assist that whether EMS is meeting Criteria or not.
- * It is supported by ISO 14001- EMS, specifications with guidance for use.

* By means of the tool ISO/TC 207/SC4 - develops international guidance on Environmental performance Evaluation.

Appraising Environmental performance can be ^{done in} two types mode

- a) Evaluates the treatability (or) costs of treatment of the waste streams.
- b) Evaluates a set of Environmental performance Indicators.

Environmental performance Evaluation by Evaluating Environmental performance indicators

- * This most common & repeatable mode Environmental Performance Evaluation.
- * In this mode, comparison of past and present Environmental performance indicators using Key performance indicators.

(P.T.O)

X. Exponentially, As per ISO 14031:2013, there are Two general categories of indicators for EPR.

- a) Environmental condition Indicators (ECI's)
- b) Environmental Performance Indicators (EPI's)
 - (OPI) i) operational performance indicators
 - ii) management Environmental Management indicators
 - (MPI) iii) management performance indicators
 - Environmental management indicators
 - management related indicators

a) Environmental condition indicators (ECI's)

They basically provide this indicators directly measure the quality of Environment.

* These indicators directly basically provide information about local, regional, National or Global condition of Environment

Ex:- Contaminant Concentration in ambient air

Contaminant Concentration in ground water

Change in ground water level.

b) Environmental performance Indicators (EPI)

i) operational performance indicators (OPI)

Indicators that measure environmental burden caused by business activities. OPI can any of following type

→ operational Input indicators (kg/unit)

Ex:- Raw material used / unit of product (kg/unit)

Energy used annually / unit of product

→ output indicators (1000l/unit)

Ex:- wastewater discharged / unit of product.

Emissions of specific pollutants

into air (Ton CO₂/year)

→ Sub indicators that quantitatively supplement the core indicators
 ex: Design, Installation of new technology etc,



ii) Management performance indicators

There are indicators that measure methods and organizations that manage and operate resources for business activities and their environmental activities or contribution to the society. It may be any of two

→ Environment management indicators
 ex: Environmental management system

- Green product
- Environment policy etc.

→ Management related indicator

ex: Number of Employee Trained
 Number of complaints from public
 Employee etc.)

Objective	Program	Performance Indicators	Indicator Type
Well water concentration conservation	Rain water harvesting	Static well water level Well water analysis	ECI E CII
Water use reduction	Water Audit	well water used per Volume of product produced (Lwater/L product)	OPI
Wastewater Treatment Efficiency	Microbiological analysis of sludge used of improved microculture	Effluent processed (L) Energy consumed (MJ/L effluent)	OPI
Employee Training and awareness	Environmental awareness Training	Employee Trained	MPI

Significance of Environmental Performance Evaluation

- i) Condensing of Environmental data into relevant information that allows monitoring, target setting, Tracing performance improvements, benchmarking and reporting.
- ii) improves material efficiency
- iii) Better control over flow management
- iv) Better understanding of organization's impacts on the Environment
- v) Providing a basis for benchmarking management, operational & environmental performance
- vi) Identifying opportunities for improving Efficiency of Energy and resource usage.
- vii) It acts as Early warning system.
- viii) Quantification of risks and Trends.
- ix) Supply the operational level as well as management level required for decision making
- x) Help in demonstrating Compliance with regulations.

NON - CONFORMANCE

Non-conformance are defined as a failure to confirm (a) non-fulfilment of specified requirements. Basically whenever an organization does not satisfy the requirements of either the standard, relevant third party requirements (or) their own procedures then that would be considered as non-conformance.

In other words Non conformance can be defined as "Deviations from standard procedure of EMS".

- * ISO 14001 4.5.2: deals with requirements for addressing, correcting and preventing non-conformance with EMS.
- * Whenever EMS audit is carried out Non-conformance is essential criteria to be looked forward to understand the EMS is properly ~~followed~~ followed (or) not.
- * Evidence for non-conformance can arise from
 - a) internal reporting system of EMS itself
 - b) from External sources such as Suppliers, End users, and stakeholders.
- * Based on Severity of non-conformance, they are generally separated into Two categories
 - a) major non-conformance
 - b) Minor non-conformance.
- a) major Non conformance:
 - (*) A deficiency that seriously impairs the effectiveness of the EMS.
 - (*) Registration to ISO 14001 delayed until major non-conformance is corrected and re-audited.

⑧ major non-conformance will always result from

- Absence of procedures
- An element of ISO 14001 not implemented
- Failure to take corrective (or) preventive action
- Having multiple ~~not~~ minor conformance that relate to the same process
- Not addressing a minor ^{non}conformance in the audit etc.,

b) Minor non-conformance

* A minor deficiency/deficit which is unlikely to result in the failure of the EMS.

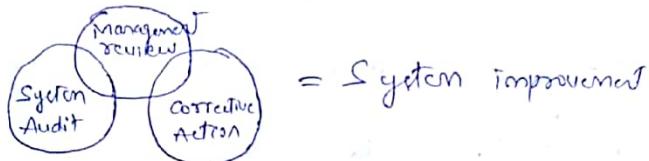
Eg:- → One (or) few records incomplete

→ procedure needs a minor change to be effective

→ One (or) a few individuals (out of many) don't use a procedure ~~corr~~ correctly.

* Consequences of minor non-conformance is that organization can receive registration to ISO 14001 but must commit to fix problem ~~is~~ within 60 days; correction will be confirmed on next audit.

Steps in identifying and resolving non-conformance
Organization must develop a procedure for investigating non-conformance from the established EMS (includes responsibility and authority)



Steps :-

- 1) Document the non-conformance
- 2) Notify and 1) By routine inspection identify non conformance and document the non-conformance
- 3) Investigate the cause of non-conformable
- 4) Notify it to higher authority and mitigate it
- 5) Prevention of Reoccurrence of by modifying existing procedure.
- 6) Communicate changed procedure to respective Personnel (in Employee, Stakeholder involved etc.)
- 7) Review effectiveness of corrective and preventive action.

CORRECTIVE AND PREVENTIVE ACTION

- * Corrective and prevention action ~~is~~ is process to fix the deficiency in the ~~the~~ EMS system, not to just ~~fix~~ to fix the ~~other~~ symptom of the problem.
- * Corrective action fixes the immediate problem and preventive action is designed to stop the problem occurring again, can stop problems before they happen (e.g., improved maintenance procedures)
- * The main ideology (or) objective of corrective and preventive action is ~~not~~ to ~~to~~ to look towards continual improvement i.e., the organization shall look towards continual improvement in itself.

ISO 14001 Says :

"The organization shall Establish and maintain procedures for defining responsibility and authority for handling and investigating non-conformance, taking action to mitigate any impacts caused, and for initiating and completing corrective and preventive action".

~~ISO 14001 4.5.2~~: As per ISO 14001 4.5.2:

* "Any corrective and preventive action taken to eliminate the causes of actual and potential non-conformance shall be appropriate to the magnitude of problem and commensurate with the environmental impact encountered".

* "The organization shall implement and record any changes in the documented procedures resulting from corrective and preventive action".

Steps involved in initiating corrective action

- Investigate the cause of non-conformance
- Recording results of investigation
- Determination of corrective actions needed to eliminate the cause of non-conformance
- Ensure that the corrective actions are effective.

Steps involved in ~~pre~~ preventive action

- Analyse all processes to eliminate potential causes of non-conformances
- ~~Initiate~~ Initiate preventive actions
- Ensure that the preventive actions are effective.

COMPLIANCE & AUDIT :

- * An Environmental Compliance audit is a review of Environmental legal compliance criteria on a particular site.
 - * The audit takes into account what specific Environmental aspects are present on site and therefore what is required by legislation in order meet those legal obligations ~~and license conditions~~.
 - * Taking into account of legal obligations, Environmental Compliance audits can be utilized to identify whether internal company procedures are being followed, particularly in line with Environmental Certifications such as ISO 14001.
- "Measuring and demonstrating Compliance is a key aspect of any Environmental management system".

Thus Environmental Compliance audit can be defined as "An Environmental audit which constitutes a systematic, documented Evaluation and Verification process to determine how well an organization manages its Environmental performance and complies with legislation and license conditions".

In the audit, it will check Compliance with

- a) with applicable regulations with respect to type of Industry
- b) with Regulatory Benchmarks of Environment
- c) with Organisational norms such as MOEF & CC
- d) with Norms of the Enterprise such as ~~MOEF~~ Company Policy
- e) with Laws of the Nation such as Acts like Biomedical waste management and Handling Rules.

Who conducts Compliance audit?

(a) Certified
External

- * It is usually conducted by internal auditor, auditor.
- * Large organizations for compliance audit large organizations in particular may support an entire compliance department headed by compliance manager to ensure adherence to codes, standards and regulations.
- * Regulators use an auditor's report to assess possible fines for non-compliance, whereas executives use them to prove that their organizations are complying with regulations.

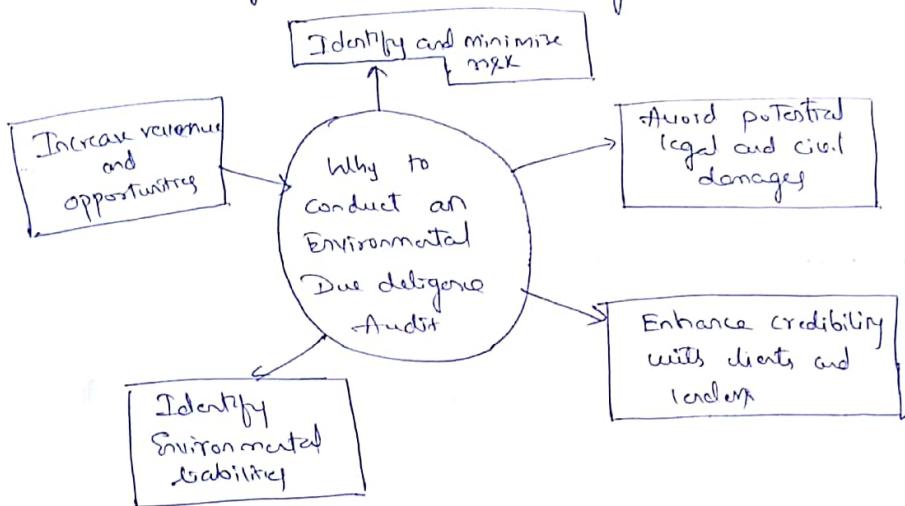
Benefits of compliance audit

- * Compliance with standards may bring sanctions & certifications
- * Non-compliance with standards may result in penalties
- * Audit provides recommendations on ways to make improvements (or) corrective actions and to prevent future deficiencies (or) non-conformities.
- * Part of an audit may also review the effectiveness of an organization's internal controls & will help to enhance internal control.

DUE DILIGENCE AUDIT

In general Due diligence is an investigation or audit of potential investment or product to confirm all facts, such as reviewing all financial records, plus anything else deemed material.

Similarly in an industry Environmental due diligence audit is to identify and evaluate actual and potential environmental liabilities and risks associated with a property to be transferred and may provide the client with a baseline for decision making and timely management of their risks during such a transaction.



This due diligence audit is conducted in two steps

- a) Phase I Environmental Site Assessment

Qualified Environmental professional performs physical inspection with legal access from the owner of the industry. He collects and take notes on site and photograph of site. He may collect following details

- * property line and site boundaries
- * Environmental conditions and issues

- ⇒ potential releases into environment
- ⇒ current and environmental aspects of a site
- ⇒ hazardous materials & their management etc.

b) phase 2 Environmental Site Assessment

Phase 2 Environmental Site Assessment is done by licensed environmental professional. Hence following data are collected

- ⇒ fieldwork & Sampling of soil, air sample, wastewater sample etc.,
- ⇒ P utility clearance
- ⇒ OSHA - Compliant health & Safety plan etc.

~~samples~~ Samples collected were analysed and social life ~~surv~~ K assessment is performed.

Unlike a statutory audit, there is no defined law/procedure by which due diligence has to be conducted, it has evolved by practice and requirements of the transaction.

Due diligence audit may be ~~conducted~~ carried out formally or informally process

a) Formal process:

Review and analysis of data provided in the form of documents, review and analysis based on interview with representatives of the target to get clear clarity on the missing links.

b) Informal process:

Significant information regarding the target is obtained through discussions, informal meetings with key persons of the target.

WASTE AUDIT

A waste audit is a physical analysis of waste composition to provide a detailed understanding of problems, identify potential opportunities, and give ~~you~~ a detailed analysis of organisation's waste composition.

Objectives of Waste Audit:-

1) Quantification of waste

To understand (w) determine type and quantity of waste generated by an industry. Common questions are

- How much waste are producing?
- What type of waste are producing?

This helps an organization to understand what type of treatment need to be provided.

2) Effectiveness

To determine how effective organization's current waste management strategy is.

Help us to understand

- i) practice that organization is having for waste management
- ii) How good is that practice?

3) Improvisation

→ How the current practice and strategies of waste management can be improvised?

Before starting a waste audit, it is most important to train the members for following aspects

- i) Safety measures
- ii) To make them understand how to handle waste materials.

Once all the necessary safety precautions taken, waste Audit should be started
 →(as per OSHA)

Steps of waste Audit with OSHA in place
 [OSHA - occupation safety and health aspects]

- a) planning of the waste audit
- b) Determination of the study area
- c) collection of waste for examination
- d) sorting / categorisation of waste
- e) Analysis of waste data.

A waste Audit will help organization / industry to clearly identify waste generation to

- obtain detailed data on waste generation
- characterize and quantify waste stream
- identify waste diversion pathways
- Identify source reduction opportunities
- Assess effectiveness and determine ways to improve Efficiency of current waste management systems in organization.
- Establish baseline or benchmark data

WASTE MINIMIZATION PLANNING

Waste Audit helps up understand amount and type characteristic of waste. By knowing which type of waste is generated by an industry, a waste can minimized be minimized by

- * Waste reduction
- * Waste diversion

→ Waste reduction has 3 possible options to reduce waste

a) Reduce:

If there is any ways to stop certain wastes from being produced in the first place.

b) Reuse:

finding creative purposes for waste generated rather than dumping in a landfill [using anything that was bought second hand]

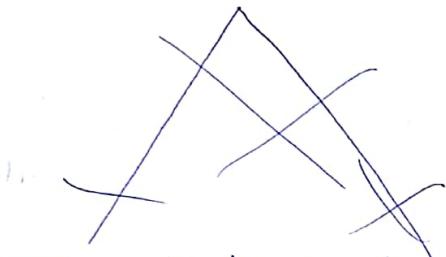
c) Recycle:

arranging for process of converting waste materials into new materials and objects

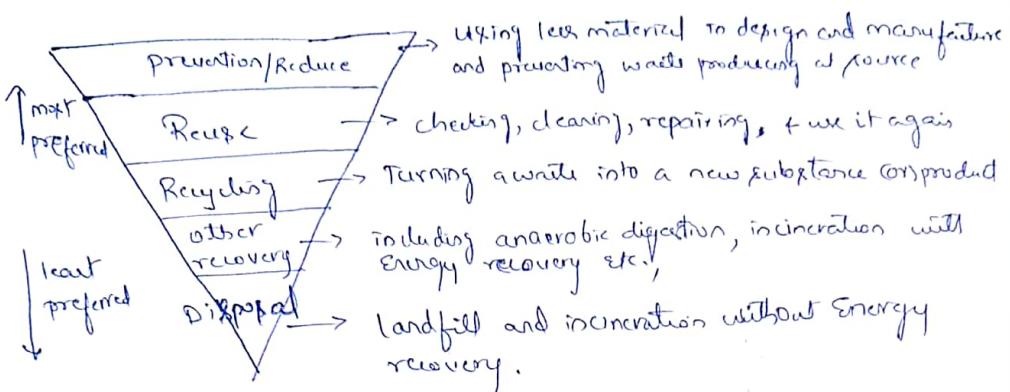
Ex: fibreglass made from glass bottles

→ Waste diversion is process of redirecting materials to reprocessing facilities such as Recycling and composting centre instead of landfill. With waste diversion, the only clear way to see progress in waste management by monitoring the landfill over the years.

→ Waste Audits help with waste diversion because when completing a waste audit, waste products are separated into certain groups (like compost, recyclables etc.).



Waste Audit, waste diversion and waste reduction all are important factors for industry to consider when creating a waste minimization strategy



Goals, Waste minimization & hierarchy

Goals of waste minimization and planning

- Reduced quantity of generated waste & by products
- "clean-technology" production
- Optimal use of raw materials, water and energy.
- Full utilisation of resources.
- Cost savings in storage, treatment and disposal of generated waste.
- Improved Environmental performance and regulatory compliance with respect to any national waste minimization goals.
- Enhance public and workers health and safety.

waste A good waste minimization and planning in a industry will help to reduce potential environmental liabilities and promote good public image on Environmental protection.

Environmental statement (Form V)

- * It is the statement process of self-inspection for improvement in process and reduction in waste over last year.
- * In today's world every industry is optimizing their sources, equipments, processes to face increasing competitions are forced to minimize environmental pollution.
- * So there is a need of pressure on pollution contributing industries to optimize their production by improving production technologies.
- * The only mandatory process in environmental statement is to fill up the Form V and submit it to PCB (Pollution Control Board).
- * the form V includes the industries needs to put their last year's no with current number to identify where they stand.

Information collected through ES (Form V).

In ES every industry should to provide information on production, consumption of raw material, water, Pollutants discharged in environment, Solid & hazardous waste. with their treatment procedure / process.

ES (Form V) filling Process.

There are mainly 9 section in ES (Form V):

Part A.

Basic information about company like Name, address, industry category, Production capacity, and date of last audit submitted.

Part -B.

This part is for comparison of water and raw material consumption for this financial year to previous year.

Part C.

This part is to measure pollutants, discharged to environment through medium Air & H₂O, how much in excess, an industry is releasing the pollutants into the environment.

Part D

This part to measure Hazardous waste from processes and from pollution control facilities.

Part E.

This part is to measure solid waste generated by industry. Also details like quantity recycled, sold & disposed.

Part F

Any new practices adopted to reduce hazardous waste.

Part G.

Impacts of pollution control measures on natural resources and with cost of production.

Part H.

Additional investment /process/measures to minimize of pollution.