

Module 2

ENVIRONMENTAL AUDIT PROCESS



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Environment Institute of Malaysia



Objective of the Module

- ◆ To brief on the audit process involved in Compliance Audit



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ENVIRONMENTAL AUDIT PROCESS

INTRODUCTION



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AUDIT CHARACTERISTICS

Systematic

Organized, planned, and thorough

Documented

Record all observations, interviews, and documents/records seen

Objective

An audit is based on fact and is unbiased



Some definitions

Evidence

Qualitative or quantitative verifiable information, records, or statements of fact based on interviews, examination of documents, observation of activities and conditions, measurements, tests, etc.

Audit Criteria

Policies, practices, procedures or requirements against which the auditor compares collected evidence about the subject matter.

Audit Findings

The result of the evaluation of the collected audit evidence compared with the agreed criteria. The findings form the basis of the audit report.



Some definitions (cont.)

EMS

The organizational structure, responsibilities, practices, procedures, processes and resources for implementing and maintaining environmental management.

Environmental Performance

An organization's achievement in managing the relationship between the full range of its activities and their significant environmental risks and effects.

ENVIRONMENTAL AUDIT PROCESS

PLANNING THE AUDIT



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GENERAL AUDIT REQUIREMENTS

The auditor needs to ensure that there is:

- Sufficient and appropriate information about the operation, organization or site
- Adequate resources available to support the audit process (make sure overall team competent)
- Adequate cooperation from the company or entity that is being audited (the auditee)
- An audit plan
- Audit protocols
- Updated Checklist & reference



AUDIT PREPARATIONS

Send pre-audit questionnaire / Notify auditee

Identify audit team and define roles

Familiarize with the site and its surroundings

Plan the audit activities

Prepare audit protocols and working documents

Clarify health & safety requirements



NOTIFICATION TO AUDITEE/ PRE-AUDIT QUESTIONNAIRE

- a pre-audit questionnaire to be sent to the organization (especially for first time audit) together with a copy of Form A : Notification of Audit
- Feedback to be sent back by organisation within 14 days
- For an unannounced audit (instructed and appointed by DOE), do not send the notification nor the questionnaire



NOTIFICATION TO DOE

- When the audit date has been agreed with the Auditee, the Lead Auditor shall notify DOE using [Form A – Notification of Audit by Registered Auditor](#)
- Audit should be targeted at the critical stage of the project (e.g. during construction for road and infrastructure projects)



PRE-AUDIT QUESTIONNAIRE

- Should be customized to reflect the:
 - Type of audit
 - Nature of the operation/ facility
 - Reporting needs

- Should be straightforward to complete:
 - Not too long
 - Simple answers
 - Clearly laid out

- Should be straightforward to analyze and interpret:
 - Checklist style
 - Structured according to specific environmental or legal themes
 - Auditors are responsible to update the checklist!



PRE-AUDIT QUESTIONNAIRE

- Some common questions includes:
 - The person completing the questionnaire
 - The company's environmental management procedures
 - The site, its surroundings and its history
 - Products and processes (including storage)
 - Lay out plan / construction phases
 - Waste management system
 - Health & safety protocols on site



AUDIT SCOPING

- **General guidance for Compliance Audit – shall cover all processes and activities that may contribute to the effective compliance to EQA, 1974**
- Lead Auditor shall ensure that the audit scope is properly planned to **cover all the relevant legal requirements & other elements that may influence compliance (e.g. training, documentation)**
- Audit scope will determine how much time is needed on site
- For special audit requested by DOE, DOE may specify the required scope



SITE FAMILIARIZATION

- Review pre-audit questionnaire / case file (if available)
- For unannounced audit requested by DOE, it is possible to get some reference from DOE; if necessary (e.g: EIA report, monitoring report)
- Familiarize yourself with:
 - The site and its surroundings
 - Potential environmental issues
 - Processes/operations
 - Raw materials/products
 - Plan, layout, BMPs
- Prepare/ obtain mass balance (if necessary)
Note : important for facilities producing or dealing with large amount of Scheduled Wastes



THE AUDIT TEAM

- Size of the team should reflect the scale of audit and timescale.
- Minimum of 2 persons in a team
- The Team **ALWAYS** includes:
 - **A Lead Auditor (Registered with DOE)**
 - **The auditor are expected to be familiar with the nature of activities to be audited**
 - **For construction sites, only CESSWI Certified Auditors (or similar) can be appointed**



THE AUDIT TEAM (continued)

- The Team **may** include:
 - **Technical Experts/ Specialists**
 - **Assistant Auditors – currently not required to register, but must fulfilled the general guidelines/ criteria specified by DOE**
- Local support
 - A **co-ordinator(s)** from the auditee should be included to support the audit team



LEAD AUDITOR

- Registered Auditor
- Characteristics
 - Experienced
 - Understands the audit process
 - Understands the operation or process
 - Good communicator
- Roles & responsibilities
 - Leadership
 - Planning of all stages of the audit
 - Allocate tasks and responsibilities
 - Ensuring audit keeps within audit scope
 - Ensures clear objectives and protocols
 - Communication with team, client and auditee
 - Reporting critical non-conformities without delay



AUDIT TEAM MEMBERS

- Characteristics
 - Good communicator
 - Knowledge of the audit process
 - Knowledge of the process of operation being audited

- Roles and responsibilities
 - Prepare work plan
 - Keep records of all communications, actions and findings
 - Prepare written report sections as assigned



LOCAL AUDIT CO-ORDINATOR

- Focal point at the facility
- “Hosts” the audit team
- Sets up interviews and escorts
- Secures access, permits etc
- Provides a “control centre” where the audit team can be based
- Provides appropriate safety clothing and equipment
- Distributes pre-audit questionnaires and coordinates their return



AUDIT CHECKLIST / PROTOCOL

- Each auditor should have their own customized guide to follow during the site visit.

- The guide may include:
 - A list of topics to be covered
 - Questions to be asked
 - Relevant regulations, standards etc (please remember to update your list!!!)
 - Areas of the site where special notice should be taken
 - Forms for documenting supporting evidence for audit findings
 - For construction site – may refer to CESSWI / CPESC List

- All supporting documents need to be signed and dated by the auditor.



THE AUDIT PLAN

- Audit Plan shall outline:
 - Dates and functional units to be audited
 - Audit objectives and scope
 - Audit methodology
 - Identification of audit team members, including audit assistants and subject experts
 - Time and duration of major audit activities
 - Audit criteria

- **THE AUDIT TEAM MUST BE BRIEFED ON THE AUDIT PLAN**



AUDIT TIMETABLE

Day 1	Day 2	Day 3	Day 4	Days ...
<p style="text-align: center;">↑</p> <p style="text-align: center;">Opening Meeting</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Brief Tour</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Start Individual Tasks</p>	<p style="text-align: center;">↑</p> <p style="text-align: center;">Individual Tasks</p> <p style="text-align: center;">↓</p>	<p style="text-align: center;">↑</p> <p style="text-align: center;">Individual Tasks</p> <p style="text-align: center;">↓</p>	<p style="text-align: center;">↑</p> <p style="text-align: center;">Individual Tasks</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Draft brief findings</p> <p style="text-align: center;">↓</p>	<p>Draft Report Complete</p>
Auditor Meeting	Auditor Meeting	Auditor Meeting	Close Out Meeting	

ENVIRONMENTAL AUDIT PROCESS

CONDUCTING THE SITE AUDIT



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OPENING MEETING



- Introduce yourself.
- Recap the purpose and scope of the audit.
- Explain the overall approach of the audit team.

- Discuss the audit plan.
- Ensure appropriateness of time.
- Explain how the information will be used.



AUDIT PROCESS

On-site audit activities:

- Investigate and understand the management systems:
 - Management of the site
 - Who has responsibilities?
 - Person in charge on **environmental matters**?
- Assess the internal controls which are necessary to ensure compliance.
- **EVALUATE DATA & RECORDS** – critical!
- Use your checklists to work through your area.

BE ALERT AND OBSERVANT



SITE OBSERVATIONS

- Observe site conditions and practices that are relevant to the regulation that is being audited.
 - e.g : inspect the monitoring stations
- Identify any non-conformities and audit further to determine the extent and the source of the problem.
- Inspect the BMPs / mitigating measures



INTERVIEWS

- Basic information Gathering : 5W & 1H
- Who
- What
- Where
- When
- Why
- How
- LISTEN to the answers.
- Pick up leads and follow through until satisfied.
- Interview people separately
- Interviews can be done during site observations or during data reviews.



DOCUMENT REVIEW

- Are there written procedures for critical points of control?
- Are the procedures consistent with the interview information?
- Is record keeping in order? Esp for Scheduled Waste(s)
- Are records reliable?
- Are financial records in order? Match financial records with volume of waste generated.
- Check for inventory records, approvals, consignment notes, licences etc
- **For facilities importing/ exporting SW – check documentation on Prior Informed Consent**



ENVIRONMENTAL SAMPLING

- Not expected in most cases; as time is limited
- If required, samples should only be enough to indicate whether further sampling is needed (in serious cases, formal sampling will be done by DOE later)
- If sampling is done, define the objective, population and sampling frame
- Method of sampling



COLLECTING ENVIRONMENTAL SAMPLES

- **SAMPLING**
 - Only, if required by DOE;
 - Requires advance preparation;
 - Must be familiar with standard sampling protocol.

- **Caution:**
 - Sampling is not the intention of the audit;
 - Difficult to manage the sampling at the same time as the audit.



COLLECTING ENVIRONMENTAL SAMPLES

- Wastewater / water samples : Feasible for auditors to collect; it is not difficult to prepare for sampling. Need to be sent to lab within a certain timeframe
- Air emissions: Need to coordinate with labs.
- Soil surface: Simple tools can be used; requires minor advance preparation.
- Groundwater: More difficult, requires heavy machinery, must be supervised (refer to standard guidelines on groundwater sampling)



AUDITOR DISCUSSIONS

- Ensure that auditors meet daily to share evidence and findings;
- Determine if additional sampling is needed;
- Close the gaps in the auditor's body of evidence;
- Determine if the problem discovered by an auditor is an isolated case or widespread.



AUDITOR DISCUSSIONS

- No assurance or unable to verify e.g.
 - Missing data records;
 - Treated waste water data is “too perfect” compared to waste water discharge observed at the facility;
 - Always no discharge from silt pond (construction)
 - Effectiveness of scrubbers cannot be verified because there are no maintenance records and no emissions data;



CLOSING MEETING

Prepare for the Closing Meeting:

Auditors:

- Discuss their findings;
- Verify all the evidence before establishing findings;
- Allow for additional evidence that shows compliance is in process;
- Compile whatever gaps in information that are considered crucial for follow-up purposes.



CLOSING MEETING

- Present the audit findings particularly the non compliances.
- Provide a copy of the draft findings to the auditee.
- Document any objections on the findings.
- Send the [audit findings](#) to DOE on the same day or the next day (through e mail or fax).

ENVIRONMENTAL AUDIT PROCESS

PREPARING THE AUDIT REPORT



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REPORT FORMAT

- **Executive summary:**
 - Non-technical.
 - Clearly present objectives, scope and audit findings.

- **Introduction:**
 - List representatives of audit team, auditee and client.
 - List objectives, scope and audit criteria.
 - summary of audit plan.



REPORT FORMAT

- **Site overview:**
 - Environmental setting;
 - Description of processes and operations.

- **Summary of audit process, e.g.,:**
 - What protocols/questionnaires/checklists were prepared?
 - Who was interviewed?
 - What parts of the site was observed?
 - What documents were inspected?
 - What obstacles were encountered

- **Confidentiality Statement**



REPORT FORMAT

- **Audit findings, e.g.,:**
 - Non-conformances with audit criteria;
 - Effectiveness of management and/or control systems;
 - Environmental risk

- **Recommendations:**
 - Suggest options for improvement;
 - Avoid being too prescriptive
 - Auditors are not responsible to give total solution
 - Or Prepare Corrective Action Plan!



ASSESSMENT OF AUDIT REPORT

- Audit report will be assessed according to how well it covers the main issues, presents the audit findings and addresses the audit objectives.
- Continuous Performance Evaluation for Auditors
- Audit findings should address:
 - Areas of good practice;
 - Issues of incompliance, major concern or potential liability;
 - Issues for improvement.



REPORT STYLE

- Use Bahasa Malaysia or English?
- Use abbreviations and technical jargon with care;
- Individual names with job titles to be used;
- Edit for grammar, spelling, and correct meaning.



REPORT STYLE

- Audit report must be signed and dated by the lead auditor
- Cite relevant regulation CLEARLY for each finding, e.g., Sec. 3 EQ (SWR) 2005;
- Be clear about the EVIDENCE for your findings. Assign detailed data/process information to an appendix;
- Be factual:
 - Avoid generalizations, guess work, opinions, hearsay;
 - Use neutral, non-judgmental words and phrases.



WRITING AUDIT FINDINGS

- Be clear about what you mean, for e.g.:
 - “The waste solvent solution was sent to a prescribed premise for treatment/disposal”.
 - What’s wrong with the statement?

- State the source of information, for e.g. :
 - “Sampling done by XXX Lab on 15 January 2013 shows TSS level is 150 mg/l. This has exceeded the EIA Condition No 14 that stated the limit not to exceed 100 mg/l.



WRITING AUDIT FINDINGS

- Explain your audit findings clearly
- Which is more appropriate?
 - “Chemical storage facilities are inadequate” **OR**
 - “In the chemical store on Level 3, no drip trays are provided beneath the taps on the solvent drums. Leakage or spillage could pass untreated directly into the site drainage”



WRITING RECOMMENDATIONS

- Are recommendations in the compliance audit report binding or not binding?
- Auditors:
 - Shall provide some recommendations for improvement
 - Do not have to provide the design for technical or engineering controls;
 - Do not give instructions.



SUBMISSION TO DOE

- Audit report must be signed by Lead Auditor
- Report to be submitted in both hardcopy and softcopy to DOE
- All audit notations to be kept by auditors and shall be submitted to DOE, if requested
- Confidentiality Statement – auditee may request auditor to sign Confidentiality Statement – not to disclose information to the public, media, etc unless required by legal proceeding



POST AUDIT ACTIVITIES

- Auditee to prepare Corrective Action Report/ Plan
- May refer to recommendation or look for other solution
- Corrective Action Report to be sent within timeframe (21 days after audit) or as specified by DOE



FOLLOW UP ACTION

- DOE will take necessary action to ensure implementation of the Corrective Action Report/ Plan and bring back the organization to compliance



End of Module 2

Thank You