

“Capacity Building and Strengthening Institutional Arrangement”

Workshop: Sustainable Development

**Checklists for Environmental Management
System Auditing for Sustainable
Development**

**Mr. Tonino Palma, Mr. Gaetano Battistella,
Mr. Fabrizio Ciocca**

APAT
Agency for Environmental Protection and Technical Services

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1. Introduction

During auditing activities the environmental verifiers can utilize useful tools such as checklist that can help them to verify the conformity of the EMS to the audit criteria

The checkilsts represent a list of things that the verifiers should check and verify and allow verifiers to use always the same procedures during the audit

In the next slides are presented general and specific checklists that are used by environmental verifiers during audit activities to evaluate EMS in relation with the environmental regulations and to assess the environmental impacts linked with the productive activities of an organization

2. General Checklists for EMS auditing

Organization Audited: _____

Lead Auditor: _____

Date: _____

ELEMENT NUMBER AND DESCRIPTION		AUDIT RESULTS	
		No. of Majors / No. of Minors	A, N, or X*
4.2	Environmental Policy		
4.3	<i>Planning</i>		
4.3.1	Environmental Aspects		
4.3.2	Legal and Other Requirements		
4.3.3	Objectives and Targets		
4.3.4	Environmental Management Program(s)		
4.4	<i>Implementation and Operation</i>		
4.4.1	Structure and Responsibility		
4.4.2	Training, Awareness, and Competence		
4.4.3	Communication		
4.4.4	EMS Documentation		
4.4.5	Document Control		
4.4.6	Operational Control		
4.4.7	Emergency Preparedness and Response		
4.5	<i>Checking and Corrective Action</i>		
4.5.1	Monitoring and Measurement		
4.5.2	Corrective and Preventive Action		
4.5.3	Records		
4.5.4	EMS Audit		
4.6	Management Review		
TOTAL			
Legend: A = Acceptable: Interviews and other objective evidence indicate that the EMS meets all the requirements of that section of the standard.		N = Not Acceptable: The auditor has made the judgment that, based on the number and type of nonconformances, the requirements of that the section of the standard are not being met.	

Example of checklist to plan audit activities following ISO14001 standards adopted by environmental verifiers

2. General Checklists for EMS auditing

Example of format used by organization to define the responsibility's employees to achieve environmental objectives

Date (____/____/____)	Individual Responsible:
Environmental Objective:	
Related Target(s):	
Related Significant Environmental Aspect(s):	
Specific Function and/or Department:	
Target Date (Month/Year): (_____/_____)	
Environmental Management Program: Action Plan	
How will this objective be met? (attach additional pages as necessary)	
What operational controls might support the achievement of this objective?	
How will this objective be tracked? (attach additional pages as necessary)	
What resources will be required to achieve this objective? (attach additional pages as necessary)	

2. General Checklists for EMS auditing

Example of format
used by environmental
verifiers to report non-
conformance
activities, and the
possible corrective
and prevention actions
taken by organization

Type of Finding (circle one):		
Nonconformance: Major Minor Positive Practice Recommendation		
Description (include where in the organization the finding was identified):		

ISO 14001 (or other EMS criteria) Reference:	Date:	Finding Number:
_____	_____	_____
Auditor: _____	Auditee's Rep.: _____	
Corrective Action Plan (including time frames):		

Preventive Action Taken:		

Individual Responsible for Completion of the Corrective Action:	Date Corrective Action Completed:	
_____	_____	
Corrective Action Verified By:		

Date: _____		

3. Specific Checklists for EMS auditing

Example of Audit Checklist for General requirement of EMS

Usually the checklists indicate the subject covered by Audit (in this case general requirement for EMS) and are reported by the requirement requested, the possible questions to verify and eventually methods to collect information

AUDIT SUBJECT: General requirements AUDITEE ORGANIZATION:	AUDITEE: LOCATION:
REQUIREMENT: The organization shall define and document the scope of its environmental management system.	REQUIRED REFERENCE(S): ISO 14001:2004, clause 4.1
QUESTION: Where has the organization defined and documented the scope of its environmental management system?	
VERIFICATION METHOD: Review the documented scope statement.	
NONCONFORMITIES/AUDIT EVIDENCE:	STATUS:*

3. Specific Checklists for EMS auditing

Example of Audit Checklist for environmental policy of EMS

<p>AUDIT SUBJECT: Environmental policy</p> <p>AUDITEE ORGANIZATION:</p>	<p>AUDITEE:</p> <p>LOCATION:</p>
<p>REQUIREMENT: Top management shall define the organization's environmental policy and ensure that, within the defined scope of its environmental management system, it . . .</p> <p>f) is . . . communicated to all persons working for or on behalf of the organization?</p>	<p>REQUIRED REFERENCE(S):</p> <p>ISO 14001:2004, clause 4.2 (f)</p>
<p>QUESTION:</p> <p>What is the organization's environmental policy? What does it mean to you in the work that you do?</p>	
<p>VERIFICATION METHOD:</p> <p>Ask employees in different levels and functions what their understanding is of the environmental policy and how it applies to their work. Take a stratified sample. Assess degree of understanding, e.g. through informal tallying of the number of employees whose understanding is excellent, fair/good, or inadequate. Include contractors working on-site or persons working off-site whose work activities are associated with the organization's significant environmental aspects.</p>	
<p>NONCONFORMITIES/AUDIT EVIDENCE:</p>	<p>STATUS:*</p>

3. Specific Checklists for EMS auditing

Example 1 of Audit checklist for legal environmental requirements for EMS

AUDIT SUBJECT: Legal and other requirements AUDITEE ORGANIZATION:	AUDITEE: LOCATION:
REQUIREMENT: The organization shall establish and maintain a procedure(s) to b) determine how these requirements apply to its environmental aspects.	REQUIRED REFERENCE(S): ISO 14001:2004, clause 4.3.2, para. 1 (b)
QUESTION: How has the organization determined the applicability of environmental legal and other requirements to its activities, products and services?	
VERIFICATION METHOD: Ask management to describe a process for assessing the applicability of legal requirements and other requirements to its activities, products and services.	
NONCONFORMITIES/AUDIT EVIDENCE:	STATUS:*

3. Specific Checklists for EMS auditing

Example 2 of Audit checklist for legal environmental requirements for EMS

Legal and other requirements - Has the organization established, implemented and do they maintain a procedure(s) to identify and have access to the applicable legal requirements and other requirements to which the organization subscribes, related to its environmental aspects and determined how these requirements apply to its environmental aspects?

What is the procedure regarding this requirement?

How does the organization know what regulations and requirements they may be subject to?

Do they subscribe to industry newsletters or websites? Do they have a third party environmental service monitor regulations for them and alert them as to any changes?

Is there a list of applicable rules and regulations?

Who is responsible for keeping this information updated and current?

Does the list include any voluntary standards?

How does the organization ensure it is complying with these regulations?

Speak with people in the organization to determine if they are aware of any regulations.

Did the organization consider national, international, state and local rules and regulations?

Does the organization have any agreements with public authorities, or with customers?

Do they subscribe to any voluntary guidelines or industry practices such as Responsible Care?

What process does the organization have for reviewing requirements to make sure they are current in the face of changing processes and business requirements?

3. Specific Checklists for EMS auditing

Example of Audit Checklist for Competence, training and awareness for EMS

<p>AUDIT SUBJECT: Competence, training and awareness</p> <p>AUDITEE ORGANIZATION:</p>	<p>AUDITEE:</p> <p>LOCATION:</p>
<p>REQUIREMENT: The organization shall ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause significant environmental impact(s) identified by the organization is (are) competent on the basis of appropriate education, training or experience, and shall retain appropriate records.</p>	<p>REQUIRED REFERENCE(S):</p> <p>ISO 14001:2004, clause 4.4.2, para. 1</p>
<p>QUESTION:</p> <p>How does the organization assess the competence of personnel performing tasks which can cause significant environmental impacts? How does the organization know which employees, or other persons working for it or on its behalf, can have significant impacts on the environment? What associated records are retained?</p>	
<p>VERIFICATION METHOD:</p> <p>Look for an analysis, by significant aspect, of the types of personnel associated with the work, and trace the organization's determination of competence. Look for the establishment by the organization of criteria of performance, and for evidence that personnel are assessed against those criteria. Include suppliers and subcontractors, as appropriate. Look for consequences of the assessment of personnel, such as implementation of training programs, educational development, and skill enhancement, and associated record keeping.</p>	
<p>NONCONFORMITIES/AUDIT EVIDENCE:</p>	<p>STATUS:*</p>

3. Specific Checklists for EMS auditing

Example 1 of Audit Checklist for Environmental Aspects for EMS

AUDIT SUBJECT: Environmental aspects AUDITEE ORGANIZATION:		AUDITEE: LOCATION:	
REQUIREMENT: The organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system.		REQUIRED REFERENCE(S): ISO 14001:2004, clause 4.3.1 para. 3	
<p>QUESTION:</p> <p>How has the organization taken into consideration its significant environmental aspects in establishing, implementing and maintaining its environmental management system?</p>			
<p>VERIFICATION METHOD:</p> <p>Review the main elements of the management system. Assess whether adequate consideration has been given to significant environmental aspects. Review especially the setting of objectives and targets, training, communication, operational control, emergency preparedness and response, and monitoring and measurement.</p>			
NONCONFORMITIES/AUDIT EVIDENCE:			STATUS:*

3. Specific Checklists for EMS auditing

Example2 of Audit Checklist for Enviromental Aspects of EMS

Environmental aspects – What evidence exists that the organization has established, implemented and maintains (a) procedure(s) to identify the environmental aspects of its activities, products or services within the defined scope of the environmental management system that it can control and those that it can influence taking into account planned or new developments, or new modified activities, products and services and determined those aspects that have or can have a significant impact(s) on the environment (i.e. significant environmental aspects)? Where is this information documented and is it kept up to date?

Where has the organization identified environmental aspects for its operations, products and services?

What was the process that was used?

Who was involved in determining aspects?

Were air emissions, possible ground and surface water contamination, landfill issues, use of natural resources, raw materials and energy considered as well as community issues such as noise, traffic, and odor?

Are current, planned and modified activities considered?

Look for potential aspects that have not been taken into consideration and ask why they were not considered.

How are significant environmental aspects determined? What criteria are used?

Does the decision making process take into consideration inputs and outputs, normal and abnormal operating conditions, start ups and shut downs, actual influences, potential influences and potential emergency situations, as well as those that are beneficial to the environment?

Does the decision making process take into consideration the amount of control and influence the organization has over its aspects?

Look for procedures.

How/when are aspects reviewed and maintained; changes to processes, changes to regulations, introduction of new raw materials?

Does the documentation reflect this change?

3. Specific Checklists for EMS auditing

Example of 'evaluation table' to assess possible environmental impacts and its consequences used by environmental verifiers

Aspect/Impact/Activity:

Date:

Category	Stages	Frequency		Severity			Impact Rating
		Use	Incident	Human Impact	Animal/Plant	Public	
Air Quality	Raw Material Storage						
Water Quality	Production (Start-Up)						
Land Quality	Production (Normal)						
Consumption	Product/ Waste Storage						
	Transportation						
	Ultimate Disposal						
					Overall Rating		

3. Specific Checklists for EMS auditing

Example of 'evaluation table' to define what are the main environmental impacts of organization's activities divided for environmental matrixes used by environmental verifiers

<i>Eco-Audit Checklist Impact</i>				
	significant	of some significance	insignificant	none
Water Quality and Quantity				
Water quality		+		
Polluting discharges to surface ground or marine waters		+		
Water quantity		+		
Air Quality				
Air quality (local)			○	
Air quality (transboundary)			○	
Polluting discharges to atmosphere			○	
Emissions of greenhouse gases			○	
Biodiversity				
Quality of area of habitats		+		
Populations or range of species			○	
Protected areas		+		
Threatened or protected species		+		

legend

Positive impact	=	+
Negative impact	=	-
Neutral impact	=	○
No impact	=	✓

3. Specific Checklists for EMS auditing

Example of 'evaluation table' to define what are the main environmental impacts of organization's activities divided for environmental matrixes used by environmental verifiers

<i>Eco-Audit Checklist Impact</i>		significant	of some significance	insignificant	none
Land Use					
Land use patterns				+	
Landscape				+	
Resource Conservation					
Energy use				O	
Waste recovery			+		
Natural resource/material use				+	
Extraction or use of non-renewable resources				O	
Waste					
Waste production			+		
Disposal			+		
Dangerous Substances					
Use of dangerous substances					✓
Risk of accidents during the transport, use and manufacture of dangerous substances					✓
Positive impact	=	+			
Negative impact	=	-			
Neutral impact	=	C			
No impact	=	✓			

3. Specific Checklists for EMS auditing

Example 1 of Audit Checklist for Environmental objectives, targets and programs of EMS

Objectives, targets and programs - Has the organization established, implemented and does it maintain documented environmental objectives and targets, at each relevant function and level within the organization?

Look for documented environmental objectives and targets.

How does the organization ensure that employees on all levels are aware of objectives and targets?

Speak with employees on all levels to determine if they are aware of objectives and targets.

How are the objectives and targets maintained? Who is responsible for maintaining them?

3. Specific Checklists for EMS auditing

Example 2 of Audit Checklist for Environmental objectives, targets and programs of EMS

Objectives, targets and programs – Are the objectives and targets measurable, where practical, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal requirements and with other requirements to which the organization subscribes, and to continual improvement?

How does the organization develop objectives and targets? Who is responsible for developing them?

What types of things were taken into consideration during development? Were reducing the creation of waste, reducing the release of specific elements to the air, reducing ground water contamination, reducing use of raw materials by reducing rework and scrap, taken into consideration? Was promoting awareness within the organization and the surrounding community considered?

Do the objectives and targets reflect the vision of the EMS policy? Are they consistent with the policy?

Do they include commitments to the prevention of pollution and compliance with applicable rules, requirements and regulations?

Have measurable targets been defined? If not, why not?

Are targets both short and long term?

3. Specific Checklists for EMS auditing

Example 3 of Audit Checklist for Environmental objectives, targets and programs of EMS

Objectives, targets and programs – When establishing and reviewing its objectives and targets, does the organization take into account the legal requirements and other requirements to which the organization subscribes, and its significant environmental aspects? Does the organization also consider its technological options, its financial, operational and business requirements, and the views of interested parties?

What factors does the organization consider in setting objectives and targets? How are significant impacts considered?

Are legal and other requirements, available technology, financial, operational and business requirements considered?

Were interested parties involved in the development of objectives? If so, how?

How were objectives developed? Who participated in their development?

3. Specific Checklists for EMS auditing

Example of Audit Checklist for planning of EMS

Has the organization established, implemented and does it maintain a program(s) for achieving its objectives and targets, including designation of responsibility for achieving objectives and targets at each relevant function and level of the organization and the means and time-frame by which they are to be achieved?

What plans have been developed to achieve objectives and targets?

Do plans include responsibility for achieving the objectives and targets?

Do plans reflect objectives and targets at lower levels of the organization?

Does the plan include its own targets and timelines for reaching them?

Look at plans. Is there one for every objective and target? What happens when something doesn't go according to plan? Is corrective action taken?

How is management kept informed of the progress towards the targets?

How are employees informed of the progress towards the targets?

Look for graphs, information in newsletters, meeting minutes, and posters.

How does the organization plan to achieve objectives and targets?

Have responsibilities been defined?

Have time lines been defined?

How is progress monitored? Is it measurable?

What has been included in the development of the plan?

How are resources obtained?

3. Specific Checklists for EMS auditing

Example 1 of Audit Checklist for inspection on-site of EMS

BACKGROUND INFORMATION

Name of Auditor: _____

Date of Audit: _____

Name of Project/Site: _____

<u>Yes</u>	<u>No</u>	
<input type="checkbox"/>	<input type="checkbox"/>	1. Does the site produce, use, or store hazardous substances or extremely hazardous substances (EHS), as defined by National Environmental Agency ?
<input type="checkbox"/>	<input type="checkbox"/>	2. If the site produces, uses, or stores hazardous substances or EHS, was the information provided to the State Emergency Response Commission (SERC) and Local Emergency Planning Committee (LEPC) for planning purposes?
<input type="checkbox"/>	<input type="checkbox"/>	3. If a hazardous substance release occurred, did the release meet the reportable quantity and have the potential to affect off-site persons? If yes, were the SERC and LEPC notified?
<input type="checkbox"/>	<input type="checkbox"/>	4. If a release has occurred, were the necessary response actions performed?
<input type="checkbox"/>	<input type="checkbox"/>	5. Are the documents/records about the hazardous substance release maintained?

NOTES / ACTIONS NEEDED TO BRING SITE INTO COMPLIANCE: _____

3. Specific Checklists for EMS auditing

Example 2 of Audit Checklist for inspection on-site of EMS

Question	Yes	Not	N.A.	Description/Observation
Emission (thermic plant)				
Does the thermic plant authorized by the local municipalites that has released the licence?				
Are utilized in this thermic plant only fuels allowed by environmental national regulations?				
Does the thermic plant respect limit pollutants emissions fixed by law?				
Are respected the specifical technical instructions to use the thermic plant in an appropriate way?				
Are implemented all the control operation to monitor and to maintance the thermic plant?				
Are the equipment utilised by workers in compliance with regulations?				

Example 3 of Audit Checklist scheme for inspection on-site of EMS

Mr. Tonino Palma, Mr. Gaetano Battistella, Mr. Fabrizio Ciocca

3. Specific Checklists for EMS auditing

Example of Audit Checklist for emergency plans of EMS

Checklist for Emergency Preparedness and Response Plans

Does your plan describe the following:

- ☒ potential emergency situations (such as fires, explosions, spills or releases of hazardous materials, and natural disasters)?
- ☒ hazardous materials used on-site (and their locations)?
- ☒ key organizational responsibilities (including emergency coordinator)?
- ☒ arrangements with local emergency support providers?
- ☒ emergency response procedures, including emergency communication procedures?
- ☒ locations and types of emergency response equipment?
- ☒ maintenance of emergency response equipment?
- ☒ training / testing of personnel, including the on-site emergency response team (if applicable)?
- ☒ testing of alarm / public address systems?
- ☒ evacuation routes and exits (map), and assembly points?

3. Specific Checklists for EMS auditing

Example of Audit Checklist for review management of EMS

Review Management	Comment
a) Is there evidence that the EMS has been audited to determine whether the system conforms to planned arrangements and has been correctly implemented and maintained?	
b) Is there any follow-up or corrective action to the audits?	
c) Is there evidence that the EMS has been reviewed by management to ensure its continuing applicability and effectiveness?	
d) Are these reviews regular?	
e) Is there any follow-up to the reviews?	

4. References

<http://www.apat.gov.it/certificazioni/site/it-IT/>

UNI EN ISO 14001 : Environmental management system: Requirements with guidance for use

http://ec.europa.eu/environment/emas/index_en.htm

<http://www.emas-ecolabel.it/site/it-IT/EMAS/>

www.sincert.it

“PROCEDURA PER L'ACCREDITAMENTO E LA SORVEGLIANZA DEI
VERIFICATORI AMBIENTALI” Comitato emas-ecolabel, apat

‘Sistemi di gestione Ambientale per le imprese’ MATTM- ARPA ER- Città di Manfredonia