



# National Centers for Coastal Ocean Science

## Environmental Management System Internal Audit Criteria

### Background to NCCOS EMS Audit Criteria

The National Centers for Coastal Ocean Science (NCCOS) is committed to establishing and maintaining robust environmental management systems (EMS) that support operations and enable the NCCOS to meet their mission efficiently.

In an effort to promote the continuous improvement of the NCCOS EMS, organizations designated as "appropriate facilities" conduct internal audits to identify those EMS elements that warrant the focus of efforts for improvement. These audits help organizations understand their current status and map a performance improvement pathway for the future.

The attached audit criteria are designed to assist organizations assess their EMS's, determine conformance with ISO 14001, and meet the NOAA requirements.

### Conducting the Internal EMS Audit

Internal EMS audits are conducted annually by individuals who have received internal auditor training or are experienced in audit-related matters, and are employees of the organization that is being audited.

The purpose of the internal audit is to provide information on the system for its continual improvement. Such an audit normally results in the listing of findings and presentation of opportunities for improvements, even for mature systems.

### EMS Audit Criteria

The EMS Audit Criteria are established:

- To assist NCCOS appropriate facilities in identifying the strong and weak elements of their EMSs.
- To enable NCCOS to identify those areas of environmental management across the organization that should be the focus of improvement actions.
- To provide a streamlined approach for verifying EMS implementation, and determining environmental performance status.
- To support NCCOS meeting report requirements, and implementing the annual Management Review.

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### Section 1:

#### Environmental Policy

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*The organization's environmental policy provides an overarching vision for the management of environmental issues and a framework for setting objectives and targets.*



### Environmental Policy

The environmental policy is well recognized by both employees and senior staff, and is used to drive the Environmental Management System.

1. Does the environmental policy include a commitment to:  Compliance  Continual Improvement  Pollution Prevention

2. Is the environmental policy:  Available to the public  Available to all employees  Used to drive Objectives

3. What % of employees interviewed knew the content of the environmental policy?

#### Note

### Section 2: Planning

The planning phase of the EMS reviews and assesses potential environmental risks, to, and from operations, allowing the organization to determine where its objectives and resources should be focused.

### Environmental Aspects

A robust process exists for identifying the significant environmental risks, to, and from operations.

1. A procedure for identifying environmental aspects:  Exists and is documented  Is followed by employees  Was used to review aspects this year

Legal and other requirements  Risks  Stewardship and Operations  Pollution Prevention Opportunity

2. Criteria used to determine which environmental aspects are significant:

3. Out of ten employees interviewed what were the three most commonly identified significant environmental aspects?

Aspect: \_\_\_\_\_

Aspect: \_\_\_\_\_

Aspect: \_\_\_\_\_

4. Out of three senior employees interviewed what were the three most commonly identified significant environmental aspects?

Aspect: \_\_\_\_\_

Aspect: \_\_\_\_\_

Aspect: \_\_\_\_\_

5. Were the organization's primary processes/operations assessed for their environmental aspects? Yes  No

### Legal and Other Requirements

A strong formal process exists to ensure the awareness of appropriate individuals to current regulatory and NCCOS requirements.

1. A procedure for identifying legal and other requirements:  Exists and is documented  Is followed by employees  Was used to review requirements this year

2. What % of employees interviewed whose job function has legal and/or other environmental requirements:

- Could articulate the requirements?
- Knew how to locate the requirement in the EMS? (i.e., have access to it).

3. Is the organization aware of its environmental requirements? (legal or otherwise)  Not Aware      Very Aware



**Note**

**Objectives and Targets**

Measurable objectives and targets enable the organization to drive performance improvement.

1. Do objectives address:
 

Significant Aspects	Legal and other requirements	Cost	Pollution Prevention
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How many objectives are established?
3. Are objectives achieved on time?
 

None	All
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>
4. To what degree have targets been achieved in the last twelve months?

**Note**

**Environmental Management Programs (EMP)**

Clear plans assign responsibility, and provide a schedule and process to achieve objectives and targets.

- |  |   |                          |
|--|---|--------------------------|
|  | Time frame for achieving the objective    | <input type="checkbox"/> |
|  | An individual designated as responsible   | <input type="checkbox"/> |
|  | Funding allocated by management           | <input type="checkbox"/> |
|  | Implementation Plan to achieve objectives | <input type="checkbox"/> |
|  | Operational Controls                      | <input type="checkbox"/> |
|  | Performance Indicators                    | <input type="checkbox"/> |
1. Management programs include:

2. Which significant aspects are not covered by a management program, and do these have operational controls?
 

	Controls in Place
Aspect: _____	<input type="checkbox"/>
Aspect: _____	<input type="checkbox"/>
Aspect: _____	<input type="checkbox"/>
Aspect: _____	<input type="checkbox"/>
Aspect: _____	<input type="checkbox"/>
Aspect: _____	<input type="checkbox"/>

3. On average, how often are EMPs updated?

- |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1 Month                  | 3 Months                 | 6 Months                 | 1 Year or More           | never                    |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Section 3: Implementation and Operation**

The implementation phase of the EMS allows the organization to use standardized processes for training, communication, and document management to ensure that objectives are achieved and operations carried out in accordance with established controls (i.e., work instructions, SOPs, plans, etc...).

**Resources, Roles, Responsibility and Authority**

Senior managers demonstrate commitment to environmental performance, and environmental roles and responsibilities are clearly defined.

1. What are the total resources currently provided for environmental management/compliance?

Financial:

Human Resources:

- |  |                          |                                     |                          |
|--|--------------------------|-------------------------------------|--------------------------|
|  | Staff                    | Middle Management                   | Upper Management         |
|  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
2. What is the position of the management representative?

3. How many individuals are there



on the NCCOS EMS Team?

4. Which of the following functions are included on the NCCOS EMS team?

- Environmental Compliance
- Safety
- Human Resources
- Science/Research Divisions
- Operation and Maintenance
- Senior Manager
- Information Technology
- Purchasing

5. What % of individuals with specific environmental responsibilities interviewed, could clearly describe their responsibilities?

Note

- Could summarize the environmental policy?
- Knew the potential environmental impacts of their job?
- Knew the organization's primary environmental aspects?
- Know who to contact regarding environmental issues?
- Knew who the EMS representative is?

Note

**Competence, Training, and Awareness**

*A robust process exists for ensuring that staff with environmental responsibilities receives appropriate and adequate environmental training.*

1. Have the job functions related to operations with significant aspects been identified and documented? Yes  No
2. Have the training requirements of job functions related to operations with significant environmental aspects been identified and documented? Yes  No
3. What % of individuals whose job functions relate to operations with significant environmental aspects could describe their responsibilities?
4. What % were considered to be competent to execute their roles and responsibilities?
5. How many employees have had environmental training specific to their job:
6. What percentage of staff have received environmental awareness training?
7. Out of 10 individuals interviewed how many:

**Communication**

*A robust communication procedure provides well defined lines of communication to employees, managers, and stakeholders.*

1. Does a procedure for internal and external communication exist, and is it documented? Yes  No
2. Does the procedure for communication provide for:
  - How environmental information is communicated to senior managers
  - How environmental information is communicated to laboratory staff
  - How environmental information is communicated to headquarters staff
  - How inquiries from external sources are routed, handled and documented
  - Whether significant environmental aspects should be communicated externally
3. On average how do employees rate environmental communications?
 

	Average rating
	Weak $\leftarrow$ $\rightarrow$ Very Strong
▪ Two senior managers	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
▪ Ten scientists	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
▪ Five general employees	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



- Five EMS Team members

**4. How do employees rate the commitment to environmental management of senior managers?**

**a. CHHR-HML Charleston, SC**

- Two senior managers
- Ten scientists
- Five general employees
- Two EMS Team members

**b. CCEHBR- Charleston, SC**

- Two senior managers
- Ten scientists
- Five general employees
- Two EMS Team members

**c. CCFHR-Beaufort, NC**

- Two senior managers
- Ten scientists
- Five general employees
- Two EMS Team members

**d. SSMC-Silver Spring, MD**

- Two senior managers
- Ten scientists
- Five general employees
- Two EMS Team members

**e. CCFHR-Kasitsna Bay, AK**

- Two senior managers
- Ten scientists
- Five general employees
- Two EMS Team members

**f. CCEHBR-Oxford, MD**

- Two senior managers
- Ten scientists
- Five general employees
- Two EMS Team members

**Note**

**Documentation**

*Critical environmental programs, processes, controls and procedures exist as formal documents, allowing for process standardization and repeatability.*

**1. Are the following documents available:**

- Environmental Policy
- Objectives and Targets
- Description of EMS Scope
- Management Programs
- Work Instructions
- Guidelines/Handbooks
- Orders

**2. How many employees could describe what environmental documents were relevant to them?**

- Two senior managers
- Ten scientists
- Five general employees
- Facilities
- Procurement
- Two EMS Team members

**Note**

**Control of Documents**

*A robust procedure ensures that critical environmental documents are maintained in an appropriate manner and, when necessary, are readily available to all applicable individuals.*



1. A procedure for document control:

Exists and is formally documented  
Describes the approval process  
Describes requirements for review  
Describes version control requirements

2. How many obsolete or out of date EMS documents were found?

3. What percentage of employees knew how to locate environmental documents relevant to them?

- Percentage
- Senior managers (ask at least 2)
  - EMS Team members (ask at least 5)
  - Scientists (ask at least 10)

4. Is an electronic system used to manage environmental documents?

Yes

5. Is there a list of controlled documents?

Yes

**Note**

**Operational Control**

*All operations that have the potential for significant environmental impacts are controlled.*

1. What percentage of activities with the potential for significant environmental impacts have operational controls?

2. Out of 5 employees required to use established operational controls, how many are able to accurately describe the control requirements?

1  2  3  4  5

Don't Know  
More than 5  
More than 10

3. How many non-conformities of operational controls have occurred over the past twelve months?

**Note**

**Emergency Preparedness and Response**

*Impacts to the environment are considered in emergency preparedness and response programs.*

1. Emergency response plans/procedures are:

- Available
- Inclusive of environmental impacts
- Reviewed once a year
- Periodically tested
- Kept updated

**Note**

**Section 4: Checking**

*The checking phase of the EMS allows the organization to monitor the performance of significant environmental risk operations, and evaluate their environmental objectives and targets (i.e. regulatory compliance etc...)*

**Monitoring and Measurement**

*Monitoring programs ensure that effectiveness of the EMS in reducing environmental risks and improving environmental performance tracked and reported.*

1. What metrics are used to measure progress toward objectives and targets?

- Annual EMS Internal Audits



- OMB scorecard
- Monthly Supervisory Office Safety Assessments
- Periodic NOAA Environmental Compliance and Safety Assessment System (NECSAS) Inspection

2. Does each objective and target have a performance metric?  Yes  No
3. Does each operational control have a performance indicator?  Yes  No
4. If any instruments are used to measure performance are they calibrated?  Yes  No
5. On average, how frequently is the performance of operational controls reviewed?
- 1 month  3 months  6 months  1 year  more
6. Out of 5 interviewed employees who are required to follow operational controls, when, on average, was their conformity to the requirements of the operational control last reviewed?
- 1 month  3 months  6 months  1 year  more

**Note**

**Evaluation of Compliance**

*The organization is In compliance with all applicable environmental regulations and strong programs are in place to ensure that this continues.*

1. How many environmental Notices of Violation has occurred this fiscal year?
2. How many environmental fines have occurred this fiscal year?
3. How many inquiries from the general public regarding environmental compliance/requirement have been received this year?

4. How may environmental compliance issues have been identified from internal inspections or reviews?

5. When was the last internal compliance/legal inspection or review?

Never  <3 months  <6 months  <1 year  >1 year

6. What is management's perception of the level of environmental compliance

Poor  Some opportunity for improvement  Adequate  Strong  Very Strong

7. What is the EMS Team's perception of the level of environmental compliance?

Poor  Some opportunity for improvement  Adequate  Strong  Very Strong

**Note**

**Non-conformity, Corrective and Preventative Action**

*Non-conformities with regulation, operational controls, or procedures are quickly corrected and the root cause addressed to prevent future recurrences.*

Exist and is it formally documented   
is followed by employees   
Meets ISO 14001 requirements

1. A procedure for correcting non-conformities:

2. How many findings were identified in the last internal audit/SD Audit?

3. How long, on average, did it take to correct findings from the last internal audit?

1 month  3 months  6 months  <1 year  more

4. How many non-conformities have been identified since the last internal audit? (e.g., EMPs, operational controls, etc.)





5. For what % of non-conformities were preventative actions developed or initiated?

**Note**

**Control of Records**

*Records necessary to verify that required actions have been executed, are well managed, protected, easily accessible and timed for retention.*

1. A procedure for controlling records:

- Exists and is formally documented
- Is followed by employees
- Meets ISO 14001 requirements

2. Were the following records available:

- EMS Team Meeting Minutes
- Past two EMS Audits
- Past two EMS Management Reviews
- Monitoring and Measurement Data
- Operational Control Monitoring Results
- Compliance Review Inspection Results
- EMS Procedures Results

**Note**

**Internal Audit**

*Internal audits have been conducted appropriately so as to ensure the EMS is operating as efficiently and effectively as possible.*

1. A procedure for internal audits:

- Exists and is it documented
- Is used by EMS Auditors
- Meets ISO 14001 requirements

2. Does the procedure for internal audits include:

- Scope of the audit
- Audit Plan
- This audit criteria
- Provisions for corrective actions

3. Did this audit follow the internal audit procedure?

- Yes
- No

4. How many internal audits have been completed to date?

5. Is there an Audit Program?

**Note**

**Section 5: Management Review**

*The management review phase of the EMS enables top managers to review the system in order to ensure that it adequately supports the organization.*

**Management Review**

*Senior management reviews help to calibrate the direction of the EMS in support of the organization's mission and ensure that priority items are understood and that sufficient resource are provided to address them.*

1. When was the last management review conducted?

- 1 month
- 3 months
- <6 months
- 1 year
- more

2. Did the input to the last management review meet the requirements of ISO 14001?

- Yes
- No





3. How many actions did management request the EMS team to take?

4. What was management's assessment of the current level of resources assigned to manage all environmental issues?

More Needed  Adequate  Not Assessed

5. What are the top two areas that management believes the EMS should focus on?  
Priority: \_\_\_\_\_  
Priority: \_\_\_\_\_

6. Did management recommend any changes to the following:

- Environmental Policy
- Objectives
- Targets
- Other:

7. What was the position of the two most senior managers in attendance (in person) during the management review?  
Position: \_\_\_\_\_  
Position: \_\_\_\_\_

**Section 6:  
Other EMS Information**

*This section gathers other information that is pertinent to the EMS.*

1. What benefits have been observed through implementation of the EMS?

**Section 7:  
Audit Background**

*The following information provides background on the audit, auditors and auditees.*

1. Date of Audit:

2. Audit Number:

3. Auditor(s):

Name:  
Name:  
Name:  
Name:  
Name:  
Name:  
Name:  
Name:  
Name:  
Name:

4. Name and Position of Senior NCCOS Management Interviewed:

Name:  
Name:  
Name:  
Name:  
Name:  
Name:  
Name:  
Name:  
Name:  
Name:

**4. Employees Interviewed**

The following number of staff at each facility were interviewed:

- CHHR HML -
- CCEHBR Charleston -
- SSMC -
- CCEHBR COL -
- CCFHR Beaufort -
- CCFHR Kasitsna Bay -