

# ENVIRONMENTAL MANAGEMENT SYSTEM SELF-DECLARATION AUDIT REPORT

December 1, 5 and 6, 2005



CCEHBR-Charleston, SC



CCFHR-Beaufort, NC



Hollings Marine Lab-Charleston, SC



SSMC-Silver Spring, MD



CCEHBR-Oxford, MD



CCFHR-Kasitsna Bay, AK

## National Centers for Coastal Ocean Science

1305 East West Highway  
Silver Spring, MD 20910

December 12, 2005

**TABLE OF CONTENTS**

1 Introduction ..... 3  
1.1 Background..... 3  
1.2 Facilities Description..... 5  
2 EMS Self-Declaration Audit Report ..... 6  
2.1 Audit Objectives ..... 6  
2.2 Audit Scope ..... 6  
2.3 Audit Team ..... 6  
2.4 Audit Planning..... 6  
2.5 Opening Meeting ..... 7  
2.6 On-site Audit Process ..... 7  
3 Audit Findings..... 9  
3.1 General Observations ..... 9  
3.2 Non-conformities..... 9  
3.3 Opportunities for Improvement ..... 11

**ATTACHMENTS**

A. Audit Schedule

## 1 Introduction

### 1.1 Background

The National Centers for Coastal Ocean Science (NCCOS) conducts and supports research, monitoring, assessments, and technical assistance to meet the National Oceanic and Atmospheric Administration's (NOAA) coastal stewardship and management responsibilities. NCCOS was formed within the National Ocean Service (NOS) in March 1999 as the focal point for coastal ocean science. NCCOS' mission is to provide coastal managers with scientific information and tools needed to balance society's environmental, social, and economic goals.

There are five NCCOS Centers. Each of its five Centers has specific capabilities and research expertise in coastal and ocean issues. Three of the Centers have on-site research facilities, while two Centers conduct research through analyses of field data or sponsored extramural research.

- Center for Sponsored Coastal Ocean Research (CSCOR) in Silver Spring, Maryland
- Center for Coastal Monitoring and Assessment (CCMA) in Silver Spring, Maryland
- Center for Coastal Fisheries and Habitat Research (CCFHR) in Beaufort, North Carolina; and the Kasitsna Bay Laboratory in Seldovia, Alaska
- Center for Coastal Environmental Health and Biomolecular Research (CCEHBR) in Charleston, South Carolina; and the Cooperative Oxford Laboratory in Oxford, Maryland
- Hollings Marine Laboratory (HML) in Charleston, South Carolina

This self-declaration audit included visits to the Cooperative Oxford Laboratory in Oxford, Maryland; and to the CCEHBR and HML Laboratories in Charleston, South Carolina.

The CSCOR's mission is to provide the highest quality research in support of coastal management decisions through competitive, peer-reviewed research and holistic ecosystem studies. The Center develops and improves predictive capabilities for managing the Nation's use of its coastal resources through competitive research programs. CSCOR also supports efforts to translate the results of its research investments, and those of others, into accessible and useful information for coastal managers, planners, lawmakers, and the public to help balance the needs of economic growth with those of conserving the resources of our Nation's Great Lakes, estuaries, and coastal ocean.

The CCMA's mission is to assess and forecast coastal and marine ecosystem conditions through research and monitoring. The scientists of CCMA conduct field observations on regional and national scales. The Center provides the best available scientific information for resource managers and researchers, technical advice, and accessibility to data.

The mission of the CCFHR is to understand and forecast ecological effects of coastal habitat and resource change. CCFHR conducts research on the effects of coastal habitat change and restoration on living marine resources such as fish, marine mammals, and protected species. CCFHR has laboratories in Beaufort, NC, and Kasitsna Bay, Seldovia, AK. At CCFHR's Beaufort Laboratory approximately 40% of

---

the staff are comprised of NOAA's National Marine Fisheries Service (NMFS). They develop the scientific information base required for fishery resource conservation, fishery development and utilization, habitat conservation, and protection of marine mammals and endangered species, the impact analyses and environmental assessments for management plans and/or international negotiations; and pursues research to answer specific needs in the subject areas of population dynamics, fishery economics, fishery engineering, food science, and fishery biology. The Kasitsna Bay Laboratory in Seldovia, AK, is a cooperative endeavor between NCCOS and the University of Alaska Fairbanks (UAF) with a strong emphasis on educational outreach and community service.

CCEHBR's mission is to conduct integrated environmental research and develop diagnostic tools to measure coastal ecosystem health. Chemical, biomolecular, microbiological, ecological, toxicological, and histological methods are developed and used in both laboratory and field studies to describe, evaluate, and predict the controlling factors and outcomes of natural and anthropogenic influences in marine and estuarine habitats. At CCEHBR's Cooperative Oxford Laboratory research focuses on the diseases of marine animals (fish, shellfish, and marine mammals), environmental problems, the effects of pollution of marine resources and statistical modeling.

The HML is a world-class NOAA research facility, operated by NCCOS, with a mission to provide science and biotechnology applications to sustain, protect, and restore coastal ecosystems, with emphasis on links between environmental condition and the health of marine organisms and humans. Although the HML is a NOAA-owned facility, it is a fully collaborative enterprise, governed by the five partner organizations through a Joint Project Agreement. The partners include NCCOS, the National Institute of Standards and Technology, the South Carolina Department of Natural Resources, the College of Charleston, and the Medical University of South Carolina. Scientists from all partner institutions work side-by-side in the laboratory, taking advantage of each other's special expertise.

Many of the NCCOS facilities comprise staff from outside NCCOS, never-the-less these staff play a critical role in the implementation and maintenance of the EMS. In general, employees and partners have all made important contributions to NCCOS's EMS.

**1.2 Facilities Description**

**Facility #1 – Oxford, MD**

The CCEHBR Cooperative Oxford Laboratory (COL) is situated on the Tred Avon River in the town of Oxford, MD. It is an owned facility and jointly operated by the Maryland Department of Natural Resources (DNR) under a cooperative agreement. Also, both NMFS’s Chesapeake Bay Office and the U.S. Coast Guard have staff at the facility. COL is the only Federal aquatic research facility on the Chesapeake Bay, the largest estuary in the United States. Given this ideal location and research focus of its staff, the laboratory is uniquely positioned to support NOS’s coastal stewardship role and to help NOAA achieve its overall strategic goal of sustaining healthy coasts throughout the U.S.

<b>Total number of employees:</b>	45
<b>Total number of buildings:</b>	16
<b>Square footage of facility:</b>	17,000
<b>Property acreage:</b>	13 acres
<b>Site boundaries:</b>	Tred Avon River, wetlands and residential neighborhood
<b>Activities that occur outside site boundaries:</b>	Field maritime sampling local areas and waterways

**Facility #2 – Charleston, SC**

NCCOS' CCEHBR and HML laboratories are located on James Island, just across the Ashley River from the historic city of Charleston, SC. It is situated on the campus-like grounds of the South Carolina Department of Natural Resources (SCDNR) Marine Resources Center, at Fort Johnson near the mouth of Charleston Harbor.

<b>Total number of employees:</b>	CCEHBR-124; HML-144
<b>Total number of buildings:</b>	2
<b>Square footage of facility:</b>	CCEHBR-32,000; HML-45,000
<b>Property acreage:</b>	CCEHBR leased building; HML Federal building w/o acreage; both are on South Carolina state land
<b>Site boundaries:</b>	Building lease MOU w/ parking lot as boundaries - Feds own no land here at Ft. Johnson Site. Building lease /use only
<b>Activities that occur outside site boundaries:</b>	Field maritime sampling local areas and waterways conducted outside site boundaries.

**2 EMS Self-Declaration Audit Report**

**2.1 Audit Objectives**

The objectives of this self-declaration audit are as follow:

- Review the NCCOS EMS and ascertain whether it is properly implemented, operating effectively as intended, and that it meets the requirements of Executive Order 13148;
- Assess whether the findings of non-conformance detected in the EMS Internal Audit are being properly addressed;
- Assess whether the Management Review was conducted in accordance with the NCCOS EMS requirements and whether decisions from it are being acted on;

**2.2 Audit Scope**

The audit assessed all operations described by the background and facility description (see sections 1.1 and 1.2), as well as all EMS elements established by the NCCOS for these operations against the foundation of ISO 14001, and the requirements of NCCOS’s EMS internal audit criteria.

**2.3 Audit Team**

The NCCOS EMS Team has selected Mr. Tom Welch, a contracted employee, as the lead auditor. As a RAB Certified ISO 14001 auditor, Mr. Welch has assisted numerous organizations achieve ISO 14001 certification, and has conducted more than 25 EMS audits.

Role	Name (Affiliation or Firm)	Contact
<b>Lead Auditor</b>	Tom Welch	(757) 893-6146 Welch_tom@bah.com

**2.4 Audit Planning**

Audit planning sessions were held to discuss and plan the EMS self-declaration audit, covering the following areas:

- Audit scope and objectives
- Audit team
- Coordination with auditees
- Audit dates, times, and other logistics
- Review of profiles, and descriptions
- Responsibilities for the audit report

## 2.5 Opening Meeting

A brief audit opening session was conducted on December 1<sup>st</sup>, 2005 at Oxford. The following NCCOS staff, NOAA/DOC representatives, and partners attended the meeting:

Name	Organization	Contact Information
Jean Duroske	NOS	301-713-3050 x165 <a href="mailto:Jean.Duroske@noaa.gov">Jean.Duroske@noaa.gov</a>
Bernie Gottholm	CCMA	301-713-3028 x168 <a href="mailto:B.William.Gottholm@noaa.gov">B.William.Gottholm@noaa.gov</a>
Jay Lewis	CCEHBR-COL	410-226-5193 <a href="mailto:Jay.Lewis@noaa.gov">Jay.Lewis@noaa.gov</a>
Sabrina Pittillo	CCFHR	252-728-8718 <a href="mailto:Sabrina.Pittillo@noaa.gov">Sabrina.Pittillo@noaa.gov</a>
Rick Meitzler	HML/CCEHBR	843-762-8842 <a href="mailto:Rick.Meitzler@noaa.gov">Rick.Meitzler@noaa.gov</a>
Raluca Semeniuc	HML	843-762-8870 <a href="mailto:Raluca.Semeniuc@noaa.gov">Raluca.Semeniuc@noaa.gov</a>
Peter Wixted	DOC	202-482-3444 <a href="mailto:PWixted@DOC.GOV">PWixted@DOC.GOV</a>
Debbie Vreebend	Maryland DNR	410-226-0098
Robert Wood	CCEHBR-COL	410-226-5193 <a href="mailto:Bob.Wood@noaa.gov">Bob.Wood@noaa.gov</a>
John Pierson	NOAA	301-713-2870 <a href="mailto:John.Pierson@noaa.gov">John.Pierson@noaa.gov</a>
Alicia Jarboe	NCCOS-Hdqt	301-713-3020 <a href="mailto:Alicia.Jarboe@noaa.gov">Alicia.Jarboe@noaa.gov</a>
Paul Comar	CCEHBR	843-762-8558 <a href="mailto:Paul.Comar@noaa.gov">Paul.Comar@noaa.gov</a>

## 2.6 On-site Audit Process

- The external self-declaration audit was conducted on December 1, 5 and 6, 2005.
- The EMS self-declaration audit was conducted primarily through interviews with facility personnel and reviews of EMS documentation and records to assess and record the suitability, adequacy, and effectiveness of all elements of the NCCOS's EMS.
- The lead auditor conducted a review of specific EMS documentation (e.g., standards, EMPs, etc.) and, where appropriate, assessed other data and documents that provided information on the functionality of the EMS.

- The lead auditor conducted interviews with individuals having a variety of roles relating to the EMS, from general employees to those whose work activities interact with or produce significant environmental aspects.
- The auditor conducted a facility walk-through to observe operations and activities and visually assess the implementation of EMS standards, programs, and controls applied to activities.
- The auditor documented findings and opportunities for improvement. Responsibility for corrective actions will be identified during the corrective action process and will be incorporated into the corrective action requests.
- This audit report will be used as input to the management review.



### 3 Audit Findings

#### 3.1 General Observations

In general, the EMS developed and implemented at NCCOS meets the requirements of a formal environmental management system, therefore NCCOS may self-declare in conformance with Executive Order 13148. Positive aspects worth mentioning include:

- Great level of awareness and understanding of EMS principles was observed during the sites visits;
- The website developed to store and maintain EMS documents and records, and to communicate other information related to the system seems to be an effective instrument to achieve these purposes;
- Corrective actions have been initiated to address the findings of non-conformance identified in the last EMS internal audit.

#### 3.2 Non-conformities

The following non-conformities were identified during the EMS Internal Audit conducted in November 2005. At the time of the Self –Declaration Audit, most of these findings were still open.

#	Classification	Description of Non-Conformity	EMS Element	Status
1	Minor	The EMS at NCCOS is still dependent on just a few EMS team members at each facility. As the system matures, emphasis should be placed on system continuity regardless of people.	Roles and Responsibilities	Goal to complete - End January Establish facility level teams and expand HQ.
2	Minor	Compliance and other competency training (such as regulatory required training) are given on a recurring basis; this forms the knowledge to perform work in an environmentally sound manner. Tracking of competency training at CCFHR needs improvement.	Training	<b>Finding Addressed 11/15/05</b> Dates that training is required have been added to the training matrix
3	Minor	Numerous work instructions are available at the EMS website, both generic and facility specific, but they are not yet integrated into day-to-day activities. Further emphasis on improving work instructions is required.	Operational Controls	Goal to complete - March 1 <sup>st</sup> Review Operational Controls as a team

4	Minor	Local procedures for communicating significant environmental aspects to contractors and suppliers were not available at Charleston or Beaufort.	Procurement	Goal to complete - March 1 Review of procurement procedure
5	Minor	NOAA contracts managed from Kansas City are not integrated into the site-specific EMS. Contractors and suppliers are not aware of site-specific environmental issues.	Procurement	March - Discuss procurement with senior managers

Corrective action plans have been created to address the findings above.

The following non-conformities were identified during the EMS Self-declaration Audit and will require that corrective actions be completed by NCCOS:

#	Classification	Description of Non-Conformity	EMS Element
6	Minor	EMS documents are stored and well managed via the EMS Intranet website. However, general housekeeping of documentation needs improvement. For example, historical environmental documents such as plans, reports, permits, etc. are kept in hardcopy thus it is difficult to know what is current and what is obsolete. Obsolete documents should be discarded or marked appropriately.	Document Control
7	Minor	The records retention system in place in Charleston needs improvement. The File Plan did not direct the reader to the storage location and some of the files identified with in the File Plan could not be located, although these were eventually found.	Records Management
8	Minor	Measurement of environmental performance needs improvement. At this time, only objectives and targets established within the EMPs are being tracked. Other performance indicators that are already monitored to satisfy reporting requirements for NOAA, DOC, and Executive Orders should be included in the EMS.	Performance Measures
9	Minor	The "Training Matrix" that is being developed needs improvement. Currently this matrix relates the employees' names and the types of training they have received. Although this is a good instrument to keep a record of training, it is necessary to tie the training requirements to job functions and roles/responsibilities.	Training

10	Minor	The COOP process could be strengthened by including hurricane and evacuation planning, especially related to the destruction of “science” and the movement of chemicals to prevent releases to the environment.	Emergency Response
11	Minor	The existing management review process could become more effective in moving the EMS forward by measure improvements to the management system resulting from reduced process inefficiencies. Current measures are essentially waste reductions and baselining not process improvements. Consider applying Six Sigma techniques to identify efficiency measures.	Management Review

### 3.3 Opportunities for Improvement

During the EMS internal audit the following opportunities for improvement were identified:

#	Opportunity for Improvement	EMS Element	Action Taken
1	It was noticed during the audit interviews that NCCOS has already implemented or is considering adopting a number of important measures that can contribute to the mitigation of negative environmental impacts of its operations. These include: green building practices, permeable parking lots, use of hybrid vehicles and bio-diesel among others. These initiatives could be managed more effectively if incorporated into Environmental Management Programs, and progress tracked during management reviews.	EMPs	Will be assessed by team
2	In future reviews of the EMS objectives and targets, NCCOS should consider including at least one objective and target specific to each facility.	Objectives and Targets	Will be assessed by team
3	Although the EMS Awareness Training available online is very comprehensive and covers all the essential elements of an EMS, it could be improved by providing examples of how these concepts can be apply to specific job types or tasks.	Training	Will be assessed by team
4	In Oxford and Beaufort, there is an Invasive Species Release Prevention Program. The accidental release of invasive species should be included in the list of aspects and have its significance determined and performance tracked as part of the EMS.	Environmental Aspects	Will be assessed by team

6	The list of regulatory requirements is incomplete. Federal requirements has been identified and recorded, as well as NOAA requirements. A list of State legal requirements that apply to each individual facility is currently being developed and should be completed as soon as possible.	Legal and Other Requirements	Finding Addressed 11/15/05 Compliance Assurance Plan was updated to include State requirements.
7	Additional performance measures should be developed for each site to monitor progress towards achieving EMS objectives and targets.	Monitoring and Measuring	Will be assessed by team

In addition, as a result of the observations made by the lead auditor during this self-declaration audit, NCCOS may want to consider the following opportunities for improvement to further strengthen its EMS:

#	Opportunity for Improvement	EMS Element
8	Currently, NCCOS compliance audits generate corrective action requests (CAR) that are not integrated into the EMS. It is recommended that both EMS non-conformities and regulatory non-compliances be addressed by using the same process.	Corrective Actions
9	Overtime, other environmental and safety documents could be added to the NCCOS EMS website to reduce the number of hardcopies.	Documentation

## Attachment A – NCCOS EMS Self-Declaration Audit Schedule

*Day 1: Thursday December 1, 2005 – Oxford, MD*

Approximate Time Frame	Audit Activity	Auditee Participation/Interviews	Record/Document/Facility Access
8:30 – 9:00	Opening Meeting: Introductions and Review Audit Plan	EHS Representatives, Environmental Management Representative NOS, Senior Management <i>Whole Team by Tele-Conference</i>	<ul style="list-style-type: none"> <li>Audit Plan</li> </ul>
9:00 – 11:00	Interview EHS Representative about EMS implementation approach (Aspects, objectives and targets, responsibilities, etc.) EMP Assessment: Waste Management Program	EHS Representative Oxford	<ul style="list-style-type: none"> <li>List of aspects</li> <li>List of objectives and targets</li> <li>EMP</li> <li>Operational Controls</li> <li>Records</li> <li>Other documents related to the improvement plan.</li> </ul>
11:00 – 12:00	Site walk-through	EHS Representative Oxford	
12:00 – 1:00	LUNCH BREAK		
1:00 – 2:00	Assess Training of Environmental Competency and EMS training	EHS Representative Oxford, Facility employees	<ul style="list-style-type: none"> <li>Training Records</li> </ul>
2:00 - 2:30	Interview with Facility Maintenance Supervisor	Facility Maintenance Supervisor	
2:30 – 3:00	Interview with Facility Manager	Branch Chief	
3:00 - 4:00	Assessment Review/Closing Meeting	EHS Representative Oxford and Facility Manager (if available)	

*Day 2: Monday December 5, 2005 – Charleston, SC*

Approximate Time Frame	Audit Activity	Auditee Participation/Interviews	Record/Document/Facility Access
01:00 – 01:30	Opening Meeting	EHS Representative Charleston	None
01:30 - 03:30	Interview Management Representative about EMS implementation approach (Aspects, objectives and targets, responsibilities, etc.)	EHS Representative Charleston	<ul style="list-style-type: none"> <li>List of aspects</li> <li>List of objectives and targets</li> <li>EMP</li> <li>Operational Controls</li> <li>Records</li> <li>Other documents related to the improvement plan.</li> </ul>
03:30 - 04:30	Site walk-through	EHS Representative Charleston	

*Day 3: Tuesday December 6, 2005 – Charleston, SC*

Approximate Time Frame	Audit Activity	Auditee Participation/Interviews	Record/Document/Facility Access
08:30 – 09:00	Opening Meeting	EHS Representative Charleston	None
09:00 – 11:00	Assess Training of Environmental Competency and EMS training	EHS Representative Charleston, facility employees	<ul style="list-style-type: none"> <li>Training Records</li> </ul>
11:00 – 11:30	Interview with Facility Manager	Center Director, CCEHBR and/or HML	
11:30 – 12:30	<b>LUNCH BREAK</b>		
12:30 – 1:00	Interview with Facility Maintenance Supervisor	Facility Maintenance Supervisor	
1:00 – 1:30	Assessment Review/Closing Meeting	EHS Representatives, Environmental Management Representative NOS, Senior Management <i>Whole Team by Video-Conference</i>	