



NOAA Shipboard Environmental Compliance Training

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INTRODUCTION

Technology is great but at the end of the day, mariners need to be willing to make the right choices if our vessels are going to minimize their effect on the environment. Behavior management is a core tenant of environmental compliance. At NOAA - during winter 2011/2012 we initiated a formal Shipboard Environmental Compliance Officers (ECO) training to help with behavior management. Feedback was positive, but improvements are expected in the future.

WHY TRAINING MATTERS

Behavior matters:

All environmental issues have behavioral components:

- Choosing most efficient vessel speed;
- Conducting regular spill drills;
- Sweeping before washing down the deck.

To make environmentally favorable choices, people need to know what actions to take and more importantly, why.

TRAINING HELPS PEOPLE UNDERSTAND IMPACTS, PROVIDING A REASON FOR CHANGING BEHAVIORS.

Efficient use of time matters:

NOAA's ECOs are busy. They stand watch for 8 hours per day and are responsible for as many as four collateral duties (including environmental compliance). They do not have the time to research best practices.

TRAINING CLARIFIES ROLES AND ACTIONS, LEADING TO MORE EFFICIENT USE OF TIME.

Buy-in is key:

A well-written procedure clears up confusion, but it does not generate ownership. Interactive training allows trainees to share experiences and work together to identify strategies for challenging problems - resulting in ownership of the issue and the solution.

TRAINING PROMOTES OWNERSHIP - WHICH IS THE MOST POWERFUL FORCE ON EARTH.

Consistent messaging matters:

NOAA ECOs are trained with similar content (albeit more in depth) to that offered to all officers at periodic Senior Ship's Officer training. Consistent messaging reduces the uncertainty associated with establishing new habits.

TRAINING GETS PEOPLE ON THE SAME PAGE.

ECO TRAINING PROGRAM CONTENT

NOAA's Shipboard ECO Workshop is a three-day workshop. The workshop was delivered twice during winter '11/'12.

Curriculum and rationale:

DAY ONE

- **ECO Duties and Administrative Issues**
Identify minimum training requirements; establish formal designation; receive and start using organizing tools.
- **NPDES Vessel General Permit**
Explain reason for this law; review procedure and orient to NOAA compliance materials; small group activity to establish common practices like inspections and logging.
- **Waste Water Management**
Provide overview of MSD, ballast water, and graywater discharge rules; discussion of best practices for reducing paint chips in the water.
- **Hazard Communication:**
Conduct orientation on how to use an MSDS; describe training, chemical inventories and MSDS library requirements.

DAY TWO

- **HAZMAT:**
Orientation to labeling (HMIS), compatibility (CAMEO chemicals) and storage; management of common materials; spill management.
- **MSDSOnline:**
Orient ECOs to use the MSDSOnline system; setting it up for your vessel, finding MSDS, adding containers, etc.
- **Hazardous Waste:**
Guidance on storage and record keeping; short explanation of manifesting and procedures for transferring to shore.
- **Visiting Scientists Chemicals:**
Procedures for inventory during loading and unloading; scientists' requirements for spill preparedness.
- **Air Pollution:**
Explanation of rules on fuel sulfur content, ozone depleting substances, engine upgrade kits, and incinerators.
- **Fleet Inspection System:**
Preparing for a visit from the NOAA Fleet Inspection Team.

DAY THREE

- **Oil Spill Management:**
Orientation to fleet-wide standardized SOPEP; reporting requirements; staging materials and drills; spill "case studies"
- **Solid Waste Management:**
Discharge rules for trash, victuals; promoting recycling; proper record keeping.
- **Human Exposure:**
Procedures and equipment orientation for sound survey; brief overview of asbestos and radioactives procedures.
- **Greening of the Fleet**
Sharing ideas for improved efficiency and reduced environmental impact, using case studies from our fleet.

ECO TRAINING PROGRAM FORMAT

Content matters... but format matters more!

This workshop must prepare the ECO to put the knowledge to work immediately. We build the format of the workshop around these tools to ensure this happens:

Relevant Information

Each section opens with attendees reading the official procedure. "Deck Plate Moments" allow ECOs to share their experiences and talk about the real challenges.

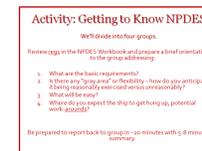
MINI DECK PLATE MOMENT

Anyone wish to comment about current painting practices? How often do you end up with chips in the water? Does Deck Dept generally tent/enclose? Sweep up chips?

Case studies give ECOs practice at thinking through problems without the pressure of performing while on board.

Using Tools & Activities

Each section includes an orientation to new tools, which attendees can put to use immediately...



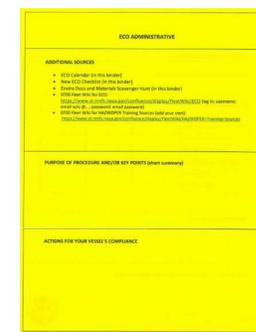
... using activities that were developed to practice new content - often in small groups.

Identifying Reasonable Actions

Every section ends with the attendees identifying potential action items. The three-day workshop ends with the attendees consolidating their action items into an action plan to brief their CO/XO.

A System to Remain Organized

Each attendee receives a bright green "Core Binder" including all environmental procedures. Orientation pages are used to help the trainee know what is included in the procedure.



PROGRAM FEEDBACK

- The program was introduced this winter inport, offered Dec. 7-9 in Pascagoula and (soon again) Jan. 31-Feb. 2 in Newport, OR.
- Feedback was quite positive.
- Attendees appreciated the use of case studies and "Deck Plate Moments" to increase the relevance.
- Workshop needs to be another day longer for more hands on activities --- but for now we'll stick with three days.
- Workshop needs to include some guidance on effective assertive communication.
- The next workshop scheduled in Jan. will be improved with feedback from the Dec. workshop.

COLLABORATIVE OPPORTUNITIES

Can NOAA, UNOLS, and other research fleets collaborate on this in the future?

Co-presenting this sort of training - will reduce the work load on any one of us and ensure a consistent and high level of dedication to environmental training across research fleets.

Is there interest in collaboration?

CONTACT INFORMATION

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