

**University-National Oceanographic Laboratory System**

**UNOLS**

**ADA Guidelines for Research Vessels**



**Fleet Improvement Committee meeting**

**4 October 2006**

# Committee Member and Observers

## Committee Membership:

- Terry Whitledge (UAF) – Chair, FIC Member
- Amy Bower (WHOI) – Sea-going Scientist
- Eric Buck (SIO) - Ship Master
- David Chapman (UDel)
- Jim Cochran (LDEO) - Langseth Conversion Rep, FIC Member
- Matt Hawkins (UDel) - Safety Committee Rep, New Vessel Operator
- Dennis Nixon (URI) - Risk Manager
- Al Suchy (WHOI) - Marine Superintendent
- Joe Ustach (Duke) – RVTEC Rep

## Corresponding Member:

- David Glover (WHOI) – Disabled Scientist

## Observers:

- NSF – Dolly Dieter and Holly Smith
- NOAA – RADM Behn and Stephan Manzo
- UNOLS – Peter Wiebe and Annette DeSilva
- PEOShips– Dave Barkdale
- LDEO Ship Operator - Paul Ljunggren

# **Americans with Disabilities Act (ADA) Guidelines for Research Vessels**

## **Background:**

- NSF has indicated the need for new ship construction and ship conversion efforts to address ADA requirements. Although UNOLS vessels are not passenger vessels and fall under USCG Subchapter U Classification, vessels that support Federally funded academic research should be equipped and arranged as feasible to accommodate persons with disabilities.
- In turn, procedural guidelines to carry out shipboard operations by persons with disabilities are needed.

# ADA Guidelines for Research Vessels

## Tasks:

- Draft preliminary ADA Guidelines for the Regional Class acquisition effort.
- Convene a 2-day community workshop to define shipboard and procedural guidelines required to accommodate sea-going scientists with disabilities.
- Establish general ADA Guidelines for new ship construction/conversion.
- Draft procedural guidelines for at-sea research operations by seagoing scientists with disabilities.

## Task:

### **Draft Preliminary ADA Guidelines for the Regional Class Acquisition effort.**

- Evaluate existing documentation and activities to determine recommendations that are feasible for the Regional Class design. These could include:
  - The draft ADA paper by Terry Whitley.
  - The draft ADA Guidelines for passenger vessels <<http://www.access-board.gov/pvaac/guidelines.htm>>.
  - Modifications implemented or included in the designs for the ARRIV, *Marcus Langseth*, and *Hugh R. Sharp*
- Provide Recommended Guidelines to NSF.

## **Task: Establish General ADA Guidelines for new ship construction/conversion.**

- Define the UNOLS philosophy for accommodating persons with disabilities at sea.
- ADA guidelines for UNOLS Vessels should be established to take into consideration:
  - The various vessel classes/sizes
  - The nature of the disability (hearing, vision, and mobility).
  - Levels of compliance should be recommended.
- Estimated costs associated with the various design modifications necessary to accommodate ADA requirements should be evaluated and defined.

**Task: Convene a 2-day Community Workshop to define shipboard and procedural guidelines required to accommodate sea-going scientists with disabilities.**

- A workshop was held at WHOI including a visit to the R/V Knorr to learn the challenges faced by the disabled.
- Incorporate workshop recommendations into ADA report to UNOLS Council.

**Task: Convene a 2-day Community Workshop to define shipboard and procedural guidelines required to accommodate sea-going scientists with disabilities.**

- Convene speakers or a panel with expertise in the area (suggestions):
  - US Access Board representative
  - Sea-going Scientist with disability
  - Naval Architect
- Broadly announce the workshop and ensure that participation will include the science community, sea-going scientists with disabilities, Naval architects, ship master, marine superintendents, agency representation, and a risk manager.



**Task: Draft procedural guidelines for at-sea research operations by seagoing scientists with disabilities.**

- The guidelines should consider:
- Shipboard mobility and access areas
- Research operations
- Evacuation / safety procedures

Recommendations will be provided to RVSS

# Suggested Project Reference Material

- Draft ADA Guidelines paper drafted by Terry Whitley.
- Evaluate guidelines on how to implement ADA requirements for passenger vessels <<http://www.access-board.gov/pvaac/guidelines.htm>>.
- Findings from David Chapman's research project.

# Timeline

- Preliminary ADA Guidelines for Regional Class Vessels – 10 June 2006
- ADA Guidelines for new ship construction and conversions – first draft 13 September 2006
- Workshop – 18-19 Sept 2006 at WHOI (Knorr)
- Submit Draft ADA Guidelines to UNOLS for review – Oct 2006
- Procedural ADA Guidelines to UNOLS – recommendations will be provided to RVSS

# Working Conditions

- Accessibility of ship provided equipment
- High contrast for deck obstacles
- Standardize data outputs- nav, meteorology, lat/long
- Maintain line-of-sight in the labs
- Accessibility of navigation output
- Shipboard Van access – living and science

# Working Conditions

- Main Lab:
- Mount items within reach.
- Lab benches, lab sinks, and fume hoods should be lower –Adjustable sink heights?  
Portable hoods
- Lower Eye wash height / shower pulls
- Alarm/pull-down accessibility
- Improved lighting
- Make data available over the network

# Living Conditions

- Adequate Lighting
- Bunks restraints (rail?) are needed.
- Must have space for turning into staterooms from passageways
- Sliding pocket doors for staterooms
- Signage for thermostat controls
- Emergency procedure/manuals should be provided in a format that could be read by visually impaired (electronic)

# Safety

- Warning strips - Tack-tile stripping at the base and top of ladders, on weather deck edges.
- Railings at the start of ladders on both sides
- Adequate lighting all areas – especially at ladders
- Avoid trip hazards – high contrast
- Reduce passageway obstacles
- Establish an area of refuge/mustering area
- Warning system (door/tactile strip/contrast stripping) at the top of ladders?
- Bright color stripe at ladders
- Wider Range of Immersion Suits sizes needed

# Safety (continued)

- Door lips are needed.
- Fire pulls lower
- Axe – point protector
- Science users should be reminded to bring spare parts for wheel chairs and prosthesis.
- Hand rails/grab bars for wheel chair users



# All areas

- Adequate lighting
- Gangway – accessibility
- Audio signals (door open/close, etc)/ induction mechanisms
- Establish a pool of adaptive equipment (vans, wheelchairs, etc)
- Provide guidance for communicating with disabled persons for captain, crew, and marine tech support – this should be addressed in early stages of pre-cruise planning. Include this on the pre-cruise planning form.
- Incorporate ADA Accessibility and Procedures in the RVSS.
- **Signage needed – Implement throughout the ship. R216**

# Issues

- General Communications
- Immersion Suits - modification needed – customized for disabled
- Post “rescue” procedures
- Buddy System – investigate legal responsibilities
- Passageway widths and turn-around space.
- Elevator reliability
- Dogs – International Regulations
- Weight of doors can be an issue – investigate power assisted doors
- Tactile strips – upkeep/rust issues, consider diamond strips

# General Guidance

- Guidance:
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- - Learn from experience
- - Know your limitations
- - Communication (between all parties) is key.
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