

## 2012 RVOC Meeting

April 24-26, 2012

Hosted by: University of Alaska Fairbanks  
Seward Marine Center at Murray's Restaurant and Convention Center,  
Menominee, MI

### Executive Summary-

The Research Vessel Operators Committee, (RVOC) met in Menominee, Michigan on Tuesday April 24 through Thursday April 26, 2012. The 2012 annual meeting was hosted by the University of Alaska Fairbanks, Seward Marine Center, with support from the UNOLS office. The RVOC Safety Committee met on Monday 23 April 2012.

The meeting was well attended by federal agency representatives, UNOLS marine superintendents, marine operations personnel, marine technicians, commercial vendors, and other members of the UNOLS community. The highpoint of the meeting was a tour of the R/V Sikuliaq and the NOAA Fishery Survey Vessel, FSV-6, currently under construction at Marinette Marine in Marinette, Wisconsin.

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## **Meeting Summary Report –**

### **Morning of Tuesday, April 24, 2012**

**Guest Speaker:** Chuck Goddard, CEO Marinette Marine Corporation

- Owned by Fincantieri, bought in 2008
- Chuck reports to a board of directors due to Navy work, does not report to Italy
- Will be building another 10 LCS's. 2<sup>nd</sup> one will be delivered in June.
- Contract to build 166 USCG RBM's
- FSV will be launched in June
- ARRV launched next fall, sails next summer
- Moved from Trade focused to area focused for world lead management. Work center work-station concept.
- Shipyard Safety Video- Required for Tour
- Tour will mostly be limited to building 10 – Sikuliaq

#### **OLD Business:**

- Accept Minutes of 2011 RVOC Meeting & Review of Action Items
- Compliance Dates for Appendix A-(7/7/2011) & B. (7/15/2014)
- Group Purchase updates of Shipboard Scientific Support Equipment items:
  - Development of Maximum Capability Document for Appendix B-Fred Jones/OSU
    - Groups of 1<sup>st</sup> priority and 2<sup>nd</sup> priority ships. Problem with Insurance and Liability requirements. Duke placed a \$5M E&O requirement. Glisten will only agree to a \$2M policy.
  - Water Bags & Dynamometers- Bill Byam/UDEL
    - 2012 SSSE proposal – turned over to east coast winch pool. 14 Institutions
    - 18 requests for 25k tension meters – Dillon dynamometer with remote display
    - 2 requests for 50k tension meters

- 32 weight bags from 1 ton to 20 tons
- Calibration load chart – Appendix A handout from Rich Finley
- Request for Dillon “Quick Check 8000”

## **NEW Business:**

### **Committee and Liaison Reports**

Watch alarm (“snooze alarm”) coming to all ships down to 150 tons – Al Suchy currently running group buy for largest ships.

Number of institutions (URI, Duke) looking at bio-diesel, vegetable oil based hydraulic fluid, electrical demand for energy conservation, etc.

#### UNOLS Report

Jon Alberts reported on the status of the UNOLS office, recent personnel changes and ongoing activities and projects. See Power Point.

#### RVOC- Safety Committee Report from meeting on 4/23/2012 – Dan Oliver/UAF

- UNOLS will issue a Safety Circular re Lithium batteries next week. See [www.fire.tc.faa.gov/pdf/systems](http://www.fire.tc.faa.gov/pdf/systems)
  - NERC has published guidance on use
  - Have found that Class D extinguishers are not effective
- Significant changes coming to App. B including elimination of 125% testing of portable system as long as all MCD’s for equipment are current. “OHDD” will probably be eliminated.

#### Ship Scheduling Committee Report

Stewart Lamerdin/MLML- SSC Chair provided the report on the UNOLS ship scheduling activities and current fleet utilization graphs. A review of the process followed was presented and trends were discussed.

#### Fleet Improvement Committee (FIC) – Report by Al Suchy/WHOI

- “Right sizing” the fleet. Al Suchy reported on recent FIC activities. FIC is waiting for direction from NSF and funding agencies about what criteria they should be using.
- Alvin upgrade:
  - Schedule – sea trials in Dec of this year
  - New LARS – Upgraded A frame (40k to 50k lbs) installed in March 2011
  - Hydro testing of sphere - scheduled for Aug, trying to shuffle other tasks to schedule this earlier
  - Swinging beam mods – sent to Caley in UK for mods
  - Oct 2012 integrate LARS w/ Atlantis, and then go through Class and Navy certification.
  - A frame static weight test 200% of rated load was conducted at BAE Shipyard in Jacksonville, Fl. in April 2011.

- Dynamic load test- Navy NAVSEA = 150% of rated load. Dynamically tested to a little over 100,000 pounds due to swinging beam not being on at time.
- ABS requirement is 125% -
- 90 kW HPU's
- Lift line – currently poly, would require going to 6” poly line. Swinging beam mods have been challenged by doing this. Still not completely determined, may end up going with Spectra.
- NAVSEA has had problems with Spectra in the past, and HOV operators perceive that there is some shock absorption with the poly line, though due to FOS of 7, this may not be the case.
- Old A frame was modified.

#### RVTEC – David Fisichella/WHOI

- CY 2012 Tech funding – proposals have come in at about 10% above last year, but NSF funding for this department has been reduced by about 10%.
- Last RVTEC in New Orleans – successful. Introduced poster sessions, post meeting results poll.
- 2012 will be hosted by LDEO.

#### AICC: Doug Russell/UW

- 2011 Healy was underway for 4 science missions. Polar Star being re-serviced in 2013. Polar Sea being decommissioned. Challenges with dealing with whaling issues.
- Positive remarks about SIO/OSU tech support for technical support on Healy.

#### SCOAR:

- No rep but presented by Jon Alberts. AAV's being fielded and the coming thing.
- Dan Schwartz is Chair and Phil McGillivray is vice chair. AUV being launched off of REVELLE later this year. If done in US air space – is controlled by FAA (though it was commented that this will be changing.)

#### RVOC–

- Election of Vice Chair: Demian Bailey/OSU elected as Chair Elect of the RVOC. Effective today.

### **Agency Reports**

#### ONR Agency Report – Tim Schnoor

- FLIP off Monterey Bay. Flip celebrates her 50<sup>th</sup> Anniversary
- ONR fleet days on UNOLS ships in 2011 was 491 days and in 2012 we have 427 days planned
- ONR has 69 days on Sharp – very happy with vessel, “smaller and capable is better.” – mentioned w.r.t. Oceans class.
- Tim starts out with \$10M budget but gets up to \$17-20 M with other Navy money.
- NSF/JMS now looking at Navy owned ships at Tim's request since NSF puts a lot of money into them.

- Life Extension – Thompson, Revelle, Atlantis, with goal to extend from 30 to 40 years. Timing TBD, dependent on availability of funds, planning for design work initiated. Focus on Electrical power generation, main and auxiliary systems.
- Planned retirements: Knorr fall 2014 and the Melville in the spring of 2015 – both six months before delivery of new Oceans class.
- IWG-FI (old FOCl). RADM. Devany, NOAA is co-chair. Working on update to fleet status plan. National Ocean Plan. OMB has invited discussion.

## **Tuesday afternoon: Agency reports continued**

### NOAA Agency Report – Ralph Rogers.

- FY2012: laid up this year – Delaware II, Ka'imimoana, Miller Freeman, McArthur II. Trying to get "utilization rate" up to at least 75%. Using 300 days in UNOLS fleet.
- 18 ships, two Marine Centers. Newport OR & Norfolk VA
- Newport – supports 8 vessels; Norfolk supports 10
- FY 2012 budget approved, supporting 3,033 operating days, 17 ships currently operating
- Delaware, KM, Miller Freeman, MacArthur II will all be taken offline this year. Also supporting charters on UNOLS vessels at about 300 days.
- Vessel New Builds – Ferdinand Hassler, will move to R.I., Reuben Lasker being built here and acceptance is planned for April. Will be home ported on the west coast.
- Joint NOAA/UNOLS Technician Training 17-20 January of this year in Newport, w/ 30 attendees. Hope to continue this in subsequent years. Possibly on the East Coast.
- Putting out Quarterly "Green Fleet" newsletter.
- 2012 Initiatives:
- Shimada and PISCES purchasing hybrid workboats, diesel + battery
- Krill Systems Fuel Management Dashboard

### NSF Agency Report – Rose Dufour.

- Has a \$30M budget gap in GEO/OCE. Level funding, 10% increase cost of ship operations. No ARRA funds left.
- Factors; lower utilizations, higher fuel costs, costs in shore support (OPE, ID).
- Reactions – fewer proposals to be funded. Move work to lower cost vessels.
- Longer view of scheduling to keep ships in area of work rather than transits.
- 81% of ship ops for 2010 will support Global and Ocean. NSF funds vast bulk of UNOLS ship time.
- Cost of Global class is increasing faster than for other vessels (up tic in "Oceans/Intermediate" because Kilo Moana moved to that group).
- Need to concentrate work on fewer ships.
- Substantial difference in Indirect Cost rates, average 13% of total operating costs. Possible level funding for 2013. Senate Appropriate Committee has warned NSF that the initiatives submitted could threaten core programs.
- Senate did acknowledge rising costs of academic fleet. Specifically addressed RCRV and possible lack of funding.

- Factors contributing to higher ship costs:
  - utilization
  - higher fuel costs (fuel accounts for about 28% , crewing 25%, MOSA /repairs 13%, food 2%, insurance 1%, “Other – 25% accounted for in Global day rate
- RCRV has been approved for NSF advancement. Release to the community is anticipated by the end of April '12 with proposals due in September 12. Questions through UNOLS office. The number of vessels built is contingent on availability of funding and the projected science utilization. “Solicitation will have lots of changes.”

#### USCG Report:

- No representative, Jon read short presentation.
- USCG to start new ice breaker acquisition project in '13 with delivery in 10 years or so.

State Dept – No report provided.

#### Special Reports:

UNOLS Wire pool – Dave Fisichella reported for Rick Trask/WHOI: Please get your wire requests into the wire pool.

#### East Coast winch pool –

- Dave Fisichella: New east coast manager will be Josh Eaton. There will be a new winch pool web site modeled after the van pool site. Day rates range from \$60 to \$200+/day but are covered for NSF funded projects. Pool can be a resource for Maximum Capability Document (MCD) development.
- Have 4 Mac winches. Light duty and medium duty. ~4,400 line pull.
- Also some TSE winches, Dynacon, Kongsberg MRU to be used with Mac winches for active heave compensation.
- New turntable design by WHOI, built on a large crane bearing foundation. Joshua Eaton, [Jeaton@whoi.edu](mailto:Jeaton@whoi.edu) full time winch pool manager.
- Winch day rates vary between ~ \$60 and \$200 per day.

#### West Coast Pool

- Zoltan Kelety: Dynacon Tracton winch, TSE “Mooring” (“modified utility line puller”) winch. OK to deploy/recover long strings for mooring but not anchors weighing 3000 – 5000 pounds.
- Moved into a 5 year proposal cycle

### Post Cruise Assessments and PCA Results

Jon Alberts reported on the PCAR Committee activities. UNOLS has integrated the post cruise assessment form into the Shiptime Request System which will pre-populate the PCA form from the ship schedules. The marine technician's response rate is increasing, averages about 30%, with the captains and chief scientists having around a 70% submittal rate.

### East Coast Van Pool –

- Bill Byam/UDEL reported for Tim Deering: 50% of Bill's time and FT maintenance person funded by pool.
- Inventory includes 2 General purpose vans, 3 Isotope vans, 3 cold vans, 3 clean vans and 1 wet van. Only new build is a shop van for Langseth. Vans take a beating in transport and the van pools need your help in making sure they are secured prior to shipping on commercial carriers
- Cold van compressors now shock mounted.
- Top shipping vs. stacked for aluminum vans. High shipping costs for short-term notice.

West Coast Van Pool – Demian Bailey/OSU reported on the west coast van pool inventory with description of each van.

### Oceanus Transfer – Wecoma Retirement

Demian Bailey/OSU provided an extensive review of the process used to evaluate the vessel condition of the R/V Oceanus and the R/V Wecoma which became the basis to make the decision to relocate the Oceanus from Woods Hole Oceanographic Institution to Oregon State University in Newport, Oregon.

### Fleet Broad Band – Al Suchy:

- Rate has gone down by over a factor of 10. FTP site, <ftp.who.edu>, established to allow users to monitor usage. Individual users have login info.
- FBB – started at \$11.34/Mbyte, down to \$1.13.

### Marinette Marine Shipyard Tour

The afternoon was spent conducting shipyard tours of the R/V SIKULIAQ and NOAA Fisheries Survey Vessel, FSV-6 at the Marinette Marine Shipyard for all RVOC participants.

1730 – Adjourn

## **Wednesday, 25 April 2012 – Morning**

### NSF Ship Inspection Program

Blake Powell/JMS Naval Architects provided an overview of the NSF Ship Inspection Program and highlighted recent findings and lessons learned.

- Nominal replacement of hydraulic hoses is about 8 years – should be labeled with date, log maintained of source, rating, etc.
- Human factors – Ergonomic designs to reduce fatigue need to be integrated into plans for navigation/communications equipment. <http://www.sname.org/MVEP/Home/>.
- ADA improvements are an ongoing concern.
- Endeavor has good hull steel replacement diagram, welcome aboard safety card, etc.
- Awards for:
  - “best grub” goes to the R/V Walton Smith
  - “Oscar recovery “(fastest man overboard recovery) goes to R/V Clifford Barnes.
- Van bindings- we continue to see incorrect bindings on the vans.
- Hydraulic hoses: tag and record date of installation, p/n, pressure rate,
- Important to have a comprehensive maintenance plan
- Use of plastic pipe \_ MTN 01-10 USCG circular
- SNAME MVEP/Home guidelines
- Graphically capture NDT readings over time. Shell expansion drawings
- Best practices
  - Welcome aboard pamphlet, card, or binder in each stateroom & on internet
  - Shipboard policies
  - General safety training info
  - Ship specific safety items
  - Keep system line diagrams up to date

#### Kilo Moana Lessons Learned –

Bob Hunt/University of Hawaii provided an extensive review of the incident aboard the Kilo Moana in January 2012. See Power Point slides

- Definitive cause of holing not yet determined, though likely cause was electrolysis and resultant corrosion
- Flooding in pump room in starboard hull.
- No hatch at deck of compartment.
- Thought that bronze foot valve for bilge suction contributed:
- Galvanic corrosion, electric cell during high velocity flow, erosion, stray currents – other sites show only slight pitting.
- Rarely get salt water in compartment.
- Lessons learned:
  - Don’t put all pumps in one compartment;
  - Removed bronze foot valves and replaced with steel;
  - Take frequent UT readings;
  - Onboard diving capability.

#### Representatives from Foreign Countries

NERC – Robin Plumley–



- RRS DISCOVERY
- RRS JAMES COOK
- Fuel consumption chart on presentation
- New ship (DISCOVERY) – 5 key persons will be onsite starting Jan 2013
- They have the same problems the rest of us do including steel replacement, difficulty recruiting crew, aging crew, medical standards, budget.

#### NIOZ & OFEG report Geraint

- All globals are in OFEG, sharing of equipment.
- OFEG Tech – exchange of personnel and information

#### NURC – Ian Sage:

- On June 30<sup>th</sup>, NATO center will close and change to the CMRE. Currently under military command will move into the agency side.
- Austerity. NATO reorganization.
- May end up changing flags and nationality of crews.
- Organization is in flux and change.

#### **Research Vessel Updates:**

##### Sikuliaq –

- Launch 13 October 2012
- Builders trials May 2013
- Acceptance trials June
- Delivery 26 July
- Post delivery dockside testing Aug /Sept
- Transit and science trials Oct to Dec (work out of WHOI for MB testing) then onto DC Baltimore, to Puerto Rico for trials in the Autec range, re-fuel in Florida,
- NSF inspection Jan 2013
- Start funded science Feb 2014
- Ice trials April 2014
- Dry dock 2014

##### Oceans Class AGOR Update: Chris MacDonald (NAVSEA), Mike Prince.

- Dakota Creek Industries, Guido Perla.
- Second ship has been awarded.
- Construction starts in June/July of this year.
- First launch Jan. '14, second 6 months later.
- Oct. '14 for delivery of 1<sup>st</sup> ship.
- Markey and Allied crane partnering to do over-the-side handling gear.
- Var. freq. prop. Motors with CPPs.
- Ships will be launched on Syncro-lift.
- 20 single crew staterooms and 12 double scientist staterooms.

### MedAire

Dr. Paulo Alves provided the UNOLS annual report and introduced the new account manager for UNOLS, Leonard Mohammad. Detelina Trendafilova has left MedAire.

The UNOLS contract was successfully rebid in July 2011 and MedAire was awarded a five year contract.

### Schmidt Ocean Institute

Pete Zerr presented an update on recent ship improvements to the R/V Falkor. See Power Point slides.

### Wire Technology –

Bamdad Pournadian from Wire Co. World Group presented an in depth presentation on new wire technologies which may help improve designs for oceanographic wires and cables. A few designs were discussed.

- New, 4-strand hybrid rope. XLT4 4x31 compacted strand 4-strand – used on tower cranes, other applications.
- 4x16 hybrid; steel outside, synthetic cores. 9/16” RBS of about 93,000 pounds. 4 strand allows smaller sheave diameter.

### Wheelhouse Technologies –

Barry Kallander presented on Computerized Maintenance Management Systems. He highlighted the benefits of having a system in place which will improve performance and extend service life on various ship systems. Some points which were covered included:

- “Maintenance often causes failures” – oil analysis.
- His background is naval nuclear operator, private nuclear power.
- Asset Management, Maintenance Management, Work Management, Inventory Management, Maintenance History, Safety Management, Document Management, Procurement/Fulfillment are tasks under Maintenance Management System.
- Parts inventory – “lost on board.”
- Three management challenges: Aging Workforce, Aging Vessels, Regulatory Compliance.

### Admiralty Law and Insurance Update

Dennis Nixon URI/GSO and UNOLS Risk Manager presented his annual presentation on fleet issues including marine insurance, safety items, risk management, and lessons learned from maritime casualties around the world over the past year. A question and answer session followed which allowed UNOLS marine superintendents to openly discuss various issues particular to their operation. See the Power Point slides.

## **Thursday, 26 Apr. 2012:**

### **Round Table Minutes 4/26**

RVOC Only Website: Sharing budget:

- It was done up to about 2002 and shared on the RVOC-only website.
- It was determined about that time that the practice should be stopped.
- It is OK, however, to share this type of info peer to peer.
- Summaries / fleet averages might be interesting for Marine Supt. to see.
- The day rate for all ships could be publicly posted for comparison. The day rates are available from NSF via FOIA, but operators can publish if desired.
- Publishing the rates might make UNOLS ships less competitive to charters.
- It was decided to update the password and keep the site

#### Vessel General Permit:

- Small Vessel General Permit (sVGP) (<79 feet)
- Require an annual report in lieu of the one time report and annual non compliance report.

#### UNOLS Job Site:

- Some institutions have hired from it.
- Many resumés received through the site.
- Every 6 months, Alice Doyle updates the posted resumes, but they are not screened.
- It's a good idea to contact the referenced Marine Supt. for a posted candidate.

#### Appendix A / B

- Limited now by hours available of the safety committee.
- Send in comments.
- A webex session could be held on Appendix A & B if there was interest.
- Appendix A should be expanded in the area of Log Keeping. It is currently vague with respect to what it requires. It should consider what data the fleet needs to manage the wire pool and its assets.
- The high resolution data, 20Hz, is important for accident investigations. App A is not clear on data record keeping requirements. Keeping 20Hz data for the long term may not be necessary.

#### High Traffic Areas

- Karen Bemis at Rutgers will continue to monitor Juan de Fuca operating area to reduce conflicts
- Other high traffic areas include the Gulf of Mexico
- Let the UNOLS office know if other areas of concern arise.

#### Berthing Policies

There have been issues when science party requests to move on board the ship in a home port when there aren't any crew members aboard. There is not a UNOLS wide policy on this and it has been left up to the institution to decide on a case by case basis.

#### Science Berthing

- It's hard to get space for time for an intern, or next generation of technicians.
- Maybe as cruises become less collaborative, more berthing will be available.

- Having a berth available on a sequence of cruises makes it difficult to host a cadet or an intern. These opportunities are necessary to grow the next generation of mariners and marine technicians
- With the new generation used to creature comforts and high expectations, it will continue to be a growing challenge vis a vis balancing ship design, cruise planning against the operator's requirements.

#### Stability Program

- It's not working well on Windows 7. Update is needed.
- Glosten mentioned that they can work with all operators to ensure that it is a useful and accurate tool. The stability program is basically an electronic version of the Trim & Stability booklet.
- Most operators seemed ok with the program.
- WHOI wondered what the future of the program holds. How will it be used? Damage Control? Glosten thinks it's possible to add DC support, but they need to think about how it could be incorporated into GSSP.
- Glosten pointed out that the resource is in the T&S booklet to determine what heel angle etc should a compartment be damaged.
- MLOC – mean light operating condition. Changes over time. Boat gains 1 or 2 % a year without weight control.
- GSSP based on vessel T&S booklet which may not have been done by Glosten.
- Towing criteria for uninspected vessels now begin required by USCG.
- Al Suchy asked about intent of Glosten effort under NSF to include damage stability capability in GSSP – this may be a complex effort.

#### Cancellation Policy for Cruises:

- Lamont has had success using the Bimco Time Charter form.
- The tricky issue is if the owner/operator has to cancel then it is liable.
- URI suggested there be a cancellation or a liquidated damages provision in the contract—a percentage of the money they expected to get to cover the fixed costs incurred when a cruise is cancelled.
- In this case, a simple Purchase Order should suffice because we can't write a "one sided" liability agreement and we don't need to over complicate this.
- NOAA is required to cover "actual costs incurred" if they cancel.

#### ITAR (International Traffic in Arms Regulation)

- Lamont is looking for points of contact at other institutions.