

# R/V F.G. WALTON SMITH



## 2011 CRUISE PLANNING MANUAL



REVISED SEPTEMBER 2011 V2.0  
MARINE OPERATIONS

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## SECTION A INTRODUCTION

### 1. GENERAL INFORMATION

The R/V F.G. WALTON SMITH is owned and operated by the University of Miami, Rosenstiel School of Marine and Atmospheric Science (RSMAS). According to the reclassification of UNOLS vessels in 2011, The R/V F.G. WALTON SMITH is a Coastal class vessel of the UNOLS fleet.

This manual has been developed to provide the prospective user with not only the arrangement and operational capabilities of the R/V F.G. WALTON SMITH, but the various procedures, policies, regulations, safety, and lifesaving precautions for embarked personnel. All prospective ship users are encouraged to review this manual with regard to the specific requirements of the proposed project.

Although it is intended to keep this manual up to date, this edition may not be the latest. Therefore, if there are any specific items required for a project, do not hesitate to request additional information from the personnel listed in the Directory of Marine Operations Personnel.

Comments and corrections which will help clarify sections of this manual, or make it more user friendly, are welcome.

It is the sole purpose of this vessel and the support personnel to provide the researcher with the very best platform and equipment to accomplish the scientific goals of the project. We are here to give you exceptional cruises and exceptional service.

Welcome Aboard

Richard Kniffin  
Director of Marine Operations

## 2. DIRECTORY OF MARINE OPERATIONS

### PERSONNEL AND FACILITIES

#### MARINE OPERATIONS

PHONE

FAX

[mardep@rsmas.miami.edu](mailto:mardep@rsmas.miami.edu)

305-421-4880

305-421-4174

Richard Kniffin, Director of Marine Operations

[rkniffin@rsmas.miami.edu](mailto:rkniffin@rsmas.miami.edu)

Ship Time Requests

Scheduling

Primary PI Contact

Daily Ship Communications

Financing & Billing

305-421-4832

305-421-4174 (fax)

Miguel McKinney, Manager of Marine Operations

[mmckinney@rsmas.miami.edu](mailto:mmckinney@rsmas.miami.edu)

Cruise Plans

Ships Configuration Form

Foreign Clearances

Ship's Agent

Shipping/Receiving & Logistics

Ship Time Requests

Scheduling

Secondary PI Contact

Financing & Billing

Insurance

Cruise Reports & Responses

305-421-4880

305-421-4174 (fax)

#### MARINE TECHNOLOGY GROUP

Rich Findley, Director of Marine Technology Group

[rfindley@rsmas.miami.edu](mailto:rfindley@rsmas.miami.edu)

Aubri Steele, Program Assistant

[asteel@rsmas.miami.edu](mailto:asteel@rsmas.miami.edu)

Harbor Branch Oceanographic Institution

Scientific Equipment and Computers

Marine Technicians

Scientific Instrumentation & Data Logging

Acoustic Sounders and Recorders

INMARSAT voice and Data

Navigation Aids & Radio Communications

772-242 2372

772-460-7767 (fax)

772-242 2582

DIVING SAFETY OFFICE

Rick Riera-Gomez, Diving Safety Officer  
[rgomez@rsmas.miami.edu](mailto:rgomez@rsmas.miami.edu)  
Certification & Dive Plan Approval  
Diving Technical Assistance  
Diving Equipment  
Compressor & Air Banks

305-421-4107  
305-421-4174 (fax)

OCEANOGRAPHIC SUPPORT FACILITY

Dodge Island, Port of Miami

Mustapha Ben Taout, Port Engineer  
Warehouse, Shipping & Receiving  
Fabrication and Repair Shop  
Ships Dock and Staging Area  
Small boats and support

305-373-3830

Edward Pombier, Radiation Safety Officer  
[epombier@miami.edu](mailto:epombier@miami.edu)  
Authorization  
Protocol  
Plan Approvals  
Information and Instructions

305-243-6369  
305-243-1658 (fax)

Andrea Orange, Executive Director Risk Management  
[aorange@miami.edu](mailto:aorange@miami.edu)  
Insurance Requirements  
Participant Authorization

305-284-3163  
305-284-3405 (fax)

### 3. MAILING AND SHIPPING INSTRUCTIONS

The Oceanographic Support Facility at Dodge Island has limited non-air conditioned warehouse storage space for advance shipments. The RSMAS Department of Marine Operations has very limited non-air conditioned storage space. Freight deliveries are accepted during the day from 0800 to 1600 hrs. Any shipments received outside of these hours will be rejected unless prior arrangements have been made or agreed to in advance. RSMAS forklift and crane equipment is available free of charge for receipt of shipments up to 10,000 pounds at the Oceanographic Support Facility. Local forklift and crane service is available for shipments weighing in excess of 10,000 pounds, however, the shipper will be responsible for charges. Arrangements must be made with the Oceanographic Support Facility for receiving and storage of equipment and/or material prior to shipment to ensure proper handling.

a. MAIL should be addressed as follows:  
University of Miami/RSMAS  
Marine Operations  
4600 Rickenbacker Cswy.  
Miami, FL 33149  
Attn:

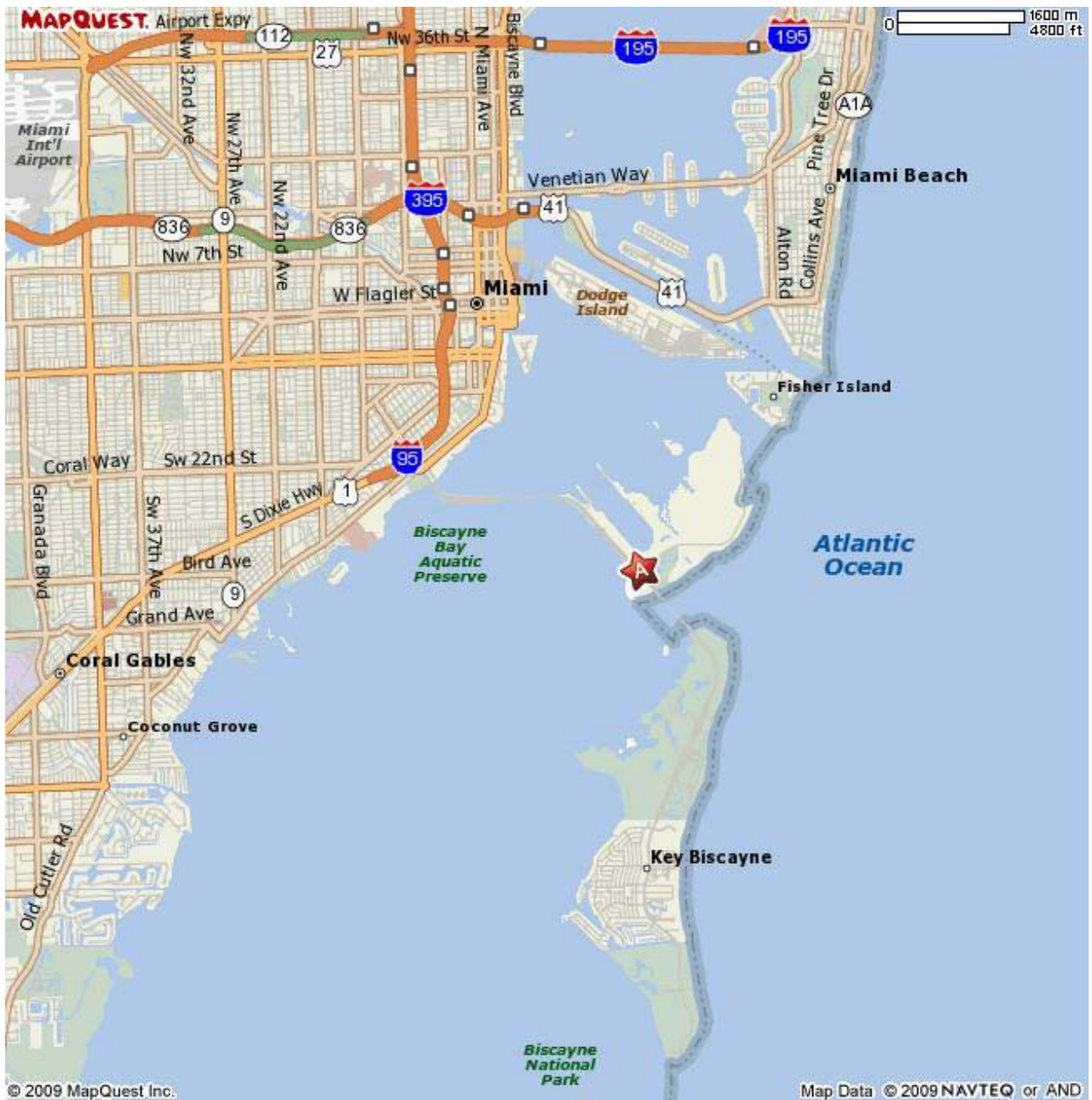
b. FREIGHT should be addressed as follows:  
*For small items or items less than 2,000 pounds:*  
University of Miami/RSMAS  
Marine Operations  
4600 Rickenbacker Cswy.  
Miami, FL 33149  
R/V F.G. WALTON SMITH Cruise #WSyrxx  
Hold for: \_\_\_\_ [P.I. NAME] \_\_\_\_\_

*For large items that will require crane service:*  
University of Miami  
Oceanographic Support Facility  
Port of Miami  
1740 Asia Way  
Miami, FL 33132  
Attention: Warehouse Receiving  
R/V F.G. WALTON SMITH Cruise #WSyrxx  
Hold for: \_\_\_\_ [P.I. NAME] \_\_\_\_\_

c. All shipments must be prepaid. No COD will be accepted. Please call us first and we will advise where your items should be shipped.

#### 4. AREA MAP

This map shows Miami, Dodge Island, and Key Biscayne. The star marks RSMAS at 4600 Rickenbacker Causeway. This is the home port for the R/V F.G. Walton Smith



## SECTION B CONFIGURATION AND EQUIPMENT

### 1. GENERAL

The University of Miami's Rosenstiel School of Marine and Atmospheric Science took delivery of a new research vessel in January 2000. The ship was built by the Eastern Shipbuilding Group at Panama City, Florida. The vessel is an aluminum catamaran and operates under subchapter "C" (Non-Inspected Vessels) with an international load line certificate and a USCG letter of designation as a research vessel.

### 2. R/V F.G. WALTON SMITH CHARACTERISTICS

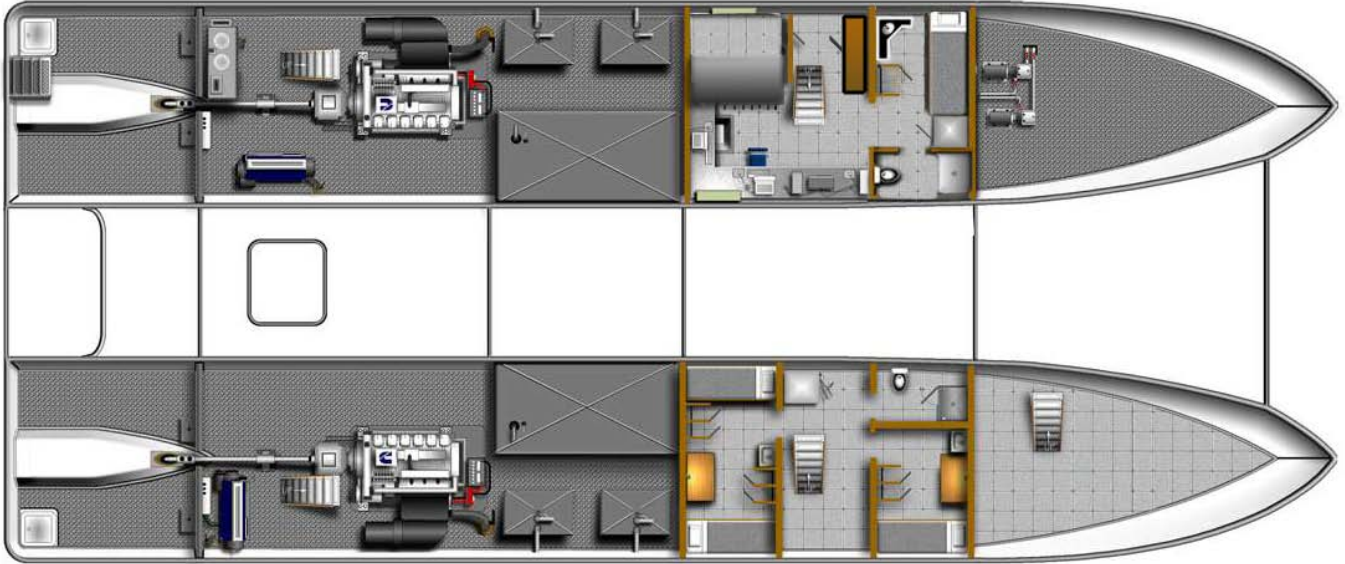
Length	96' / 29.26 m
Breadth	40' / 12.19 m
Draft	7' 0" / 2.13 m
Gross Tonnage	97 GRT; 325 GT ITC
Propulsion	Twin Cummins QSK 19 - 760hp each
Propellers	Servogear variable pitch
Electrical	Twin 80kw generators 208 vac, 3 phase, 110/120 vac, single phase UPS in laboratories
Fresh water	3,000 gallons (11,500 L) plus reverse osmosis water maker
Fuel	10,000 gallons (37,854 L)
Complement	20 berths, 7 crew, 13 science party
Speed	9 - 10 knots cruising

### 3. OUTBOARD PROFILE



PROFILE

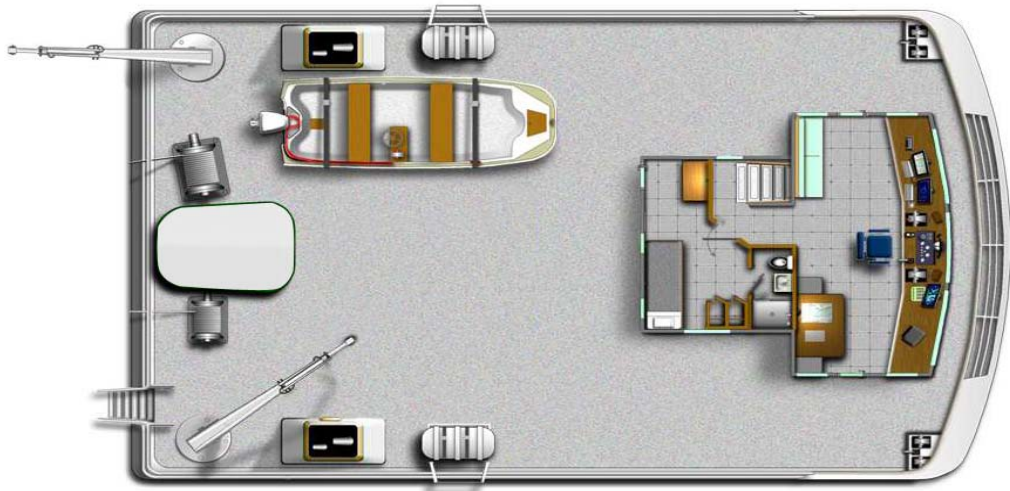
#### 4. DECK PLANS & PHOTOS



LOWER DECK



MAIN DECK



UPPER DECK (O1 DECK)



AFT DECK



MESS



CABIN

## 5. WINCHES AND WIRE

There are two Hawboldt winches permanently installed on the 01 deck aft of the stacks. A Markey fiber optic winch can be also be mounted if needed. The winches are hydraulically operated by electronic controls from the aft control station (winch cab) or a mobile control box, which allows operation of the winches from the boat deck, the main deck or the wet or dry lab. The wires are led directly through blocks on the "A" frame. The wire is automatically rinsed with freshwater as it is retrieved.

### WINCH SPECIFICATIONS

Port Winch:                      Hawboldt Industries Ltd.                      Model: SPR-2840-S      SN: 21094-1

Wire	Maximum Load	Wire Length (M)
¼", 3x19	3,375 lbs.	3,000

Starboard Winch:                      Hawboldt Industries Ltd.                      Model: SPR-2840-S      SN: 21094-2

Cable	Maximum Load	Cable Length (M)
.322" EM	5,000 lbs	4,850

Markey Compact Hydraulic Profiler Winch                      Model: Com-7H      SN: 17954

Cable	Maximum Load	Wire Length (M)
.322 – (3)SM fiber w/ST termination	2,000 Lbs	1000

*Please contact us for additional information or if different wire or cable is required.*

## 6. SHIPBOARD CRANES

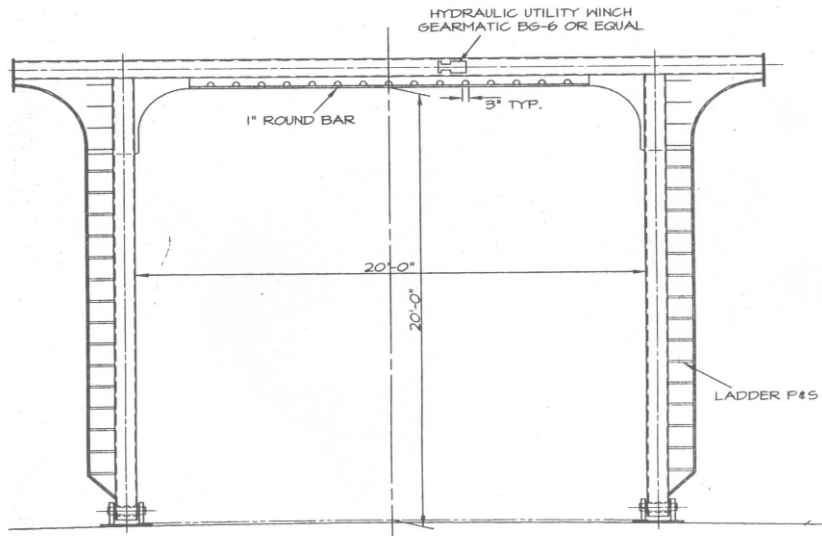
The shipboard cranes are North American Crane Co. which are mounted on the aft end of the boat deck on the starboard and port sides. These cranes can handle 9,500 lbs at a radius of 5' and 3,300 lbs at full extension of 20.5'. They are positioned to service the after deck, the boat deck and the "A" frame.



CRANES AND WINCH CAB

## 7. STERN "A" FRAME

The hydraulically operated A-frame on the stern of the vessel is designed to handle 10,000 lbs. The maximum safe working load on centerline is 10,000 lbs. There is a hydraulic winch on the A-frame to assist in handling instruments, moorings, small boats, etc. over the stern. It has a safe working load of 5,000 lbs. Vertical and horizontal clearances are 20 feet.



A FRAME

## 8. OTHER EQUIPMENT

Dynamic positioning for precise station keeping using bow thrusters, controllable pitch propellers, and independent rudders is controlled by a Kongsberg Simrad Dynamic Positioning (DP) system which is tied to a TSS POS/ MV 320 Position, Attitude, Heading, and Vertical Reference Sensor.

An installed transducer suite includes ADCP transducers, 600 kHz and 75 kHz phased array for measuring ocean currents, and a 7 x 3.5 kHz transducer array for sub-bottom profiling. A 12 kHz transducer is also available for pole mounting. We can also pole mount transducers as needed on the port side with a custom fabricated swivel pole mount system. Please give ample notice if pole mounting is desired.

The ship has a notched stern to facilitate handling equipment into the water using the A-frame. We typically have this section filled but the plug can be removed if needed. The ship is also equipped with a moon-pool between hulls for transducers or other equipment needs. Please give ample notice if the moon-pool or notched stern are to be used.

Vessel control stations are located in the bridge, on the 01 deck wings, and at the after control station on the 01 deck.

Sea water flowing systems, one PVC, one PVDF, with pickups at the bow and space in the wet lab for instrumentation.

The following instruments are currently installed to collect data via the sea water flowing system:

- SBE Micro TSG 45
- SBE Temp 38
- Sea Point Fluorometers – Chlorophyll & CDOM
- Turner Designs C6 multi-sensor platform with Chlorophyll, CDOM, Cruse Oil, Optical Brighteners, Phycoerythrin and Phycocyanin.
- Meteorological sensors include wind speed and direction, air temperature, relative humidity, barometric pressure, and solar radiation.

### **Over-the-side systems**

- Sea Bird CTD system with optional auxiliary sensors including fluorometer, transmissometer and dissolved oxygen sensors. The CTD has 12 ten liter bottles on a Seabird Carousel for water sampling.
- 1 Meter MOCNESS with a compliment of up to 9 nets with two mesh sizes.

## 9. LABORATORIES

DRY LAB - Consists of approximately 480 sq. ft. of air-conditioned space. Bulkheads are fitted with Unistrut allowing for repositionable lab benches and cabinets. The benches are covered with Formica and have 4" back splashes. Electric services include 110 VAC and UPS 110 VAC. Other services include hot and cold fresh water, PVC uncontaminated seawater and PVDF uncontaminated seawater service. There is also an ice machine that produces up 385 lbs of flake ice per day with storage of up to 80 lbs of flake ice. Access is through the wet lab to the aft main deck.



DRY LAB

WET LAB - Consists of approximately 200 sq. ft. of air-conditioned space located aft of the dry lab with direct access to the after main deck. Bulkheads are fitted with Unistrut allowing for installation of benches, cabinets and equipment. Electric services include 110 VAC and UPS 110 VAC. Other services include hot and cold fresh water, PVC uncontaminated seawater and PVDF uncontaminated seawater service, and de-ionized water. There are windows that look out on the aft main deck.

- a. SCIENTIFIC REFRIGERATION - There is a 13.8 Cubic foot upright freezer and a 10.5 upright refrigerator with a small freezer compartment in the wet lab.



WET LAB

## 10. NAVIGATION SYSTEMS

### a. POSITIONING SYSTEMS

Bridge: Raytheon RayPlot 320 WAAS GPS receiver.

Furuno GP90 GPS associated with Furuno FA-100 AIS

TSS Pos/MV 320

ET Shop: Raytheon Raynav 300 WAAS GPS receiver.

### b. POSITION PLOTTING SYSTEM

Kongsberg Simrad Planning Station - C MAP display software.

### c. ECHO SOUNDERS

Knudsen Engineering RM/B 200/28 kHz

(2) Furuno FCV-620 50/200 kHz located on the bridge.

- d. RADARS
  - Furuno model FR-2115 "Black Box" ARPA Radar – X Band up to 96 miles with 18 inch rectangular flat screen color display. Azimuth stabilized with GPS input.
  - Furuno model FR-7112 ARPA Radar – X Band up to 72 Miles with monochrome display. Azimuth stabilized with GPS input.
  - Both radar displays are located on the bridge.
  - Furuno model FR-1833C – Radar repeater located in winch cab.
- e. GYRO COMPASS
  - S.G. Brown model Meridian system consists of a transmission unit, master compass, power adapter and static converter.
- f. AUTOPILOT
  - Kongsberg Simrad 2xOT, Planning Station, C-MAP display.
- g. WIND SPEED AND DIRECTION
  - RM Young Windbird

## 11. COMMUNICATIONS EQUIPMENT, SCHEDULES, FREQUENCIES AND POLICIES

- a. VHF RADIOS
  - Two ICOM ICM-127 25 Watt transceivers mounted on the bridge.
  - One Standard Horizon 25 Watt transceiver is mounted in the winch cab.
  - Two 5 Watt handheld transceivers are available as needed.
  - User -provided boats must supply their own VHF transceivers.
- b. SINGLE SIDE BAND RADIO
  - One ICOM M710 150 Watt SSB radio mounted on bridge.
- c. CELLULAR PHONE
  - The Motorola Cellular phone is available any time within range of cellular service. The scientific party may use this system by notifying the Master. Charges for this service are \$1.00 per minute plus long distance charges and must be paid to the Master in cash prior to leaving the vessel. The scientific party is encouraged to bring their own cellular equipment.

- d. IRIDIUM SATELLITE PHONE  
Iridium Eurocom service is available to allow for voice, fax, and data (2400 baud) communication extending 200 miles offshore and throughout the Bahamas and the Caribbean. Communications are made using SIM cards, similar to calling cards. A 20 minute card may be purchased from the Master.
- e. HIGHSEASNET SATELLITE SYSTEM  
A continuous shore side data link is provided at approximately 56 kb/sec (comparable to dial up service). Access to the system is through a wireless access point located in the Dry Lab. The more users, the slower this connection will be.
- f. FLEET BROADBAND SATELLITE  
Access to this system is provided through a hardwire connection in the Chief Scientist's cabin. This system is intended to be a backup to the HighSeasNet System. Costs for this system are based on the amount of data transferred. The ship has an annual allowance that is prepaid for. Heavy usage will incur additional costs to the user.

## COMMUNICATIONS SCHEDULES

Verbal reports are sent everyday between 0900 and 1000 hours. Email reports are sent before noon if possible. The scientific party must submit any necessary communication to the Master at least 1 hour prior to the scheduled transmission times if it is to be included in these scheduled sessions. There is no charge for this service provided that all communications are vital to the success of the operation.

## COMMUNICATIONS FREQUENCIES

All VHF marine channels are available. Channel 16 is monitored. Telephone calls utilizing ShipCom via VHF are possible. The charge for VHF radiotelephone service is .99/minute with a 3 minute minimum. Calls may be placed collect to anywhere in the United States.

UHF SSB - 2182.0 kHz (monitored)

ShipCom is the only United States 24-hour provider of HF SSB radiotelephone and VHF radiotelephone Ship-to-Shore voice service. ShipCom stations WLO, WCL, KLB and KNN are all remotely controlled from Mobile, Alabama where operators are on duty 24 hours per day 7 days per week for radiotelephone Ship to Shore and Shore to Ship calls.

## COMMUNICATIONS POLICY

The Master is responsible for all ship's transmitted communications. All shipboard communications equipment is specifically for support of the scientific projects and the safe operation of the ship.

All costs incurred for personal communications must be paid to the Master in cash at the time of the call. Any charges accrued by the scientific party, not collected at the time of the call, will be charged to the Scientific PI. Please ask what the current charges are before placing a call.

## 12. WORKBOATS

The normal workboat aboard the R/V F.G. WALTON SMITH is one 16 ft. foam collar (center console) aluminum RIB with a 90 HP Yamaha 4-stroke electric start outboard engine. Additional boats may be provided depending upon the availability at the time of the request. Boats may be stored on the aft deck or on the 01 deck.



Other workboats available are;

(1) 15 ft. foam collar (center console) RIB with a 90 HP Yamaha 4-stroke electric start outboard engine.

(2) 15' Boston Whalers (center console) each with a single 40 HP electric-start outboard engines.

(1) 18' Avon RIB (center console) with a 70 HP electric-start outboard engine.

### 13. USER-PROVIDED BOATS

All boats not provided by the Marine Department must be outfitted to the following standards in accordance with 33 CFR 174,175:

- a. Vessel must possess a current state registration.
- b. There shall be a type I or II personal flotation device (PFD) for each person aboard. All vessels 16 ft. and over are required to carry one (1) type I or II PFD for each person on board plus one additional type IV PFD. PFDs are not to be removed from the R/V F.G. WALTON SMITH for use on small boats.

In addition, the following items must be aboard:

A working VHF transceiver, an adequate paddle, an adequate anchor with at least 100 feet of line attached, a sound signal device, either horn or whistle, flares, distress flag and working navigation lights.

Marine Operations engines will not be used on any user-provided boat.

## SECTION C TECHNICAL SUPPORT

### 1. EQUIPMENT USE AND COSTS

There are two categories of equipment: GENERAL EQUIPMENT and SPECIALIZED EQUIPMENT. GENERAL EQUIPMENT has the following characteristics: broad user bases, moderate cruise maintenance and calibration costs, and moderate expendable costs. SPECIALIZED EQUIPMENT is installed on an individual cruise basis and has the following characteristics: smaller user base, high maintenance and calibrations cost, and are generally used over the side.

### 2. TECHNICIANS

Technicians are available up to twelve (12) hours per day and are paid through the NSF - Shipboard Technician Support Grant in support of NSF and other agency sponsored projects. Costs for Technician support beyond the normal 12 hours per day must be paid through the principal investigator's grant.

During the cruise the technician's duties will include maintenance and repairs to shared use equipment to assure that equipment is in optimum condition. The technician will also provide coordination between the ship's crew and the scientific party, with particular attention to over-the-side operations and to assist the scientific party as needed with support of ship installed scientific data collection equipment and computers. The Shipboard Technician program is not intended to support routine watch standing, routine operation of winches or underway sample collection.

Marine Operations, based on the Ship Configuration Form and the Cruise Plan, will determine the minimum number of technicians assigned to any particular cruise.

### 3. RESEARCH DIVING

Researchers conducting diving operations from University of Miami vessels must operate under the rules as set forth in the UNOLS RESEARCH VESSEL SAFETY STANDARDS. They must also operate under the auspices of a formal research diving program that is recognized by the UM/RSMAS Diving Control Board as meeting the minimum standards of the American Academy of Underwater Sciences policies and procedures manual.

Scientific personnel from other institutions that lack such a program must operate under the policies and procedures of the University of Miami/RSMAS.

If diving is included in the cruise plan, please request a copy of the Diving Safety Manual from RSMAS Marine Operations promptly to assure that all diving operations comply as required. This manual is also available online:

<http://www.rsmas.miami.edu/assets/pdfs/dive/dive-manual.pdf>

The Diving Safety Officer must receive a dive plan for dives involving only UM/RSMAS divers at least two weeks prior to departure. For trips or cruises involving non-UM/RSMAS divers, the Diving Safety Officer must receive a dive plan 1 month prior to departure. The Dive Plan is available online:

<http://www.rsmas.miami.edu/resources/dive-Office/dive-plan/>

Visiting Scientists from institutions whose diving program is an organizational member of the American Academy of Underwater Sciences (AAUS) will be allowed to dive with our program or from our ships upon submitting a letter from their institution's Dive Officer stating:

- a. That they are currently authorized with that program,
- b. Hold a current dive physical,
- c. Hold a current CPR & First Aid and Oxygen Provider certification,
- d. Have been diving within the past six months,
- e. Have proof of insurance for hyperbaric oxygen therapy,
- f. Have a letter of self insurance stating the diver is covered by the home institution's workman's compensation program, and
- g. Diving Safety Officer approves this diver participating in the dive operation in question.
- h. NOTE : The UM/RSMAS Diving Safety Officer reserves the right to request additional information or additional requirements be met.

Visiting Scientists from institutions that do not have a diving program or whose program is not an organizational member of the American Academy of Underwater Sciences (AAUS) must complete the Basic Diver Checkout Procedure, Section 4.41 in the UM/RSMAS Diving Safety Manual.

Dive Forms available online:

<http://www.rsmas.miami.edu/resources/dive-Office/forms/>

#### 4. RADIOACTIVE MATERIAL

- a. Authorization: A statement is required from the investigators home institution health physicist, or other person charged with responsibility for radioisotope use, which shows that the investigator is authorized to possess and use the radioisotope materials involved in the proposed work. Only the investigator shall be allowed to perform experiments involving radioisotopes on the ship.
- b. Experimental protocol: A reasonably detailed protocol of the proposed experiment must be provided. This shall specify such details as manipulation procedures, planned location for work, arrangements for isolation and contamination monitoring procedures of the nuclides to be used and their amounts, forms and concentrations. Explanatory figures and diagrams may be included, if appropriate.
- c. Statement of use: Following the cruise a statement of use must be sent to the University of Miami Radiation Control Center. This should show amounts of nuclides: 1) taken aboard the ship, 2) disposed of upon return to port, 3) remaining unused and removed from the ship by the investigator.
- c. Waste disposal: A statement of the arrangement to be followed for collecting, storing and disposing of all radioactive waste generated in the experiments. The University of Miami is specifically prohibited from disposing of ANY radioactive waste at sea under the terms of its State of Florida license. Therefore, all waste must be returned to shore for disposal by the investigator's home laboratory, or at the University of Miami with prior arrangements made with the Radiation Control Officer.
- e. Monitoring: A series of radiation safety wipe samples (100 cm<sup>2</sup>) of area within which the experiments are to be carried out should be taken by the investigator prior to and after use of the radioisotopes on the ship. The extent of the contamination should be measured by an appropriate measurement technique of sensitivity capable of detecting significant amounts of contamination. The results of these measurements, which can be completed following the cruise, must be forwarded to the Radiation Control Officer within three days after the termination of the cruise. The location of the samples should be indicated on a plan of the work areas involved. With ample notice a scintillation counter can be made available onboard for monitoring spills and cleanups. The University of Miami routinely carries out pre and post-monitoring procedures, in addition to that required of the investigator. This includes a post cruise SWAB test, which is much more sensitive than the radiation safety wipe test. Nevertheless, the investigator is responsible for proper monitoring and clean up. Costs associated with any significant spills that are not properly reported and/or cleaned will be

billed to the PI and may result in the revocation of RSO clearance for the responsible person to further perform radioisotope projects aboard the vessel, as well as any University of Miami facility.

- e. Send Required Information to Mr. Edward Pombier at the Radiation Control Center and a copy to Marine Operations as well:

**RADIATION CONTROL CENTER**

**MARINE OPERATIONS**

Mr. Edward Pombier, R.S.O.

University of Miami

Radiation Control Center

P.O. Box 016960

Phone 305-243-6369

University of Miami

Marine Operations

4600 Rickenbacker Cswy.

Miami, FL 33149

5. EXPLOSIVES, UNDERSEA SONIC EMITTERS AND DRAGGED DEVICES

- a. Explosives: The use and handling of explosives is restricted to persons possessing sufficient training and certification. Explosives cannot be loaded in the Port of Miami. Explosives not used during the cruise must be disposed of at sea. Loading explosives in U.S. ports is supervised by the U.S. Coast Guard Captain of the Port. The Captain of the Port requires the following:

1. Explosive handling facilities for loading.
2. Date of Loading.
3. Supplier and copy of explosive order.
4. Carriers certificate for packing.
5. Unit quantity of each type of explosive and hazardous material.
6. Unit packaging dimensions and weight.
7. Unit identification as listed in 46 CFR 146-149.
8. Magazines to be provided, material dimension and weight.
9. Magazine markings.
10. Name of certified shooter.
11. Shooting safety procedure.

- b. Undersea Acoustic Transducers: Whenever undersea sonic emitters, dragged devices or explosives are used, the Scientific Principal Investigator is responsible for notifying the Department of the Navy two weeks prior to operations of the:

1. Nature of operations.
2. Date and time of operations.
3. Size and type of device to be deployed or used.
4. Ships radio call sign, if applicable.

Written information is to be provided to:  
Commander Naval Oceanography Command  
(Attn.: Code N321)  
NSTL Station  
Bay St. Louis, MS 39529

## 6. HAZARDOUS MATERIAL

Federal Occupational Health and Safety Administration (OSHA) rules require chemical manufacturers, importers and distributors to label containers of hazardous chemicals. Material Safety Data Sheets (MSDS) for all hazardous materials brought on board must be provided to the Master for informational purposes in the event of an emergency. In addition, the Chief Scientist must brief all persons on board who will be exposed to such materials (called "Right To Know") in the general physical and health hazards involved, appropriate protective measures, clean up procedures, and accidents or injuries resulting from exposure to the material.

These MSDS are posted in the Drylab and Wetlab as appropriate.

## SECTION D VESSEL OPERATIONS

### 1. CREW

A seven-person crew comprised of a Master (captain), Chief Mate, Engineer, Second Mate, Assistant Engineer/Third Mate, Cook and Marine Technician man the R/V F.G. WALTON SMITH. Personnel are highly qualified to operate the vessel and are experienced in oceanographic work. The Chief Scientist is requested to report and discuss any problems with equipment and/or procedures with the Master or his assistant as soon as they are identified.

### 2. OPERATING HOURS

The R/V F.G. WALTON SMITH operates up to 24 hours per day.

### 3. OPERATING DAYS

Operating days include all days or any part thereof which the vessel spends away from the port of embarkation which is usually the RSMAS dock. The day begins and ends at midnight. **Departures and returns will be limited to daylight hours except in an emergency.** Departures and arrivals are also subject to the state of the tide as the vessel needs approximately one half of the tide between low and high to safely approach or depart the dock. The scientific party must request the required number of days, on the Shiptime Request Form, for successful completion of their projects.

### 4. STAGING AND LOADING

The R/V F.G. WALTON SMITH will normally be staged and loaded at the RSMAS dock but may occasionally depart from the Dodge Island Oceanographic Facility. Loading may begin at 0800 hrs on the day prior to departure. When no assistance is required and no interference with ships maintenance or repair work will occur, laboratories and deck areas will be made available during the hours of 0800 to 1600 for equipment set up prior to the scheduled loading day. Crew rest dictates that loading which continues beyond 1630 hrs of the scheduled day of departure may prohibit departure that day. Special loading requirements can be met provided they are included in the Ship Time Request and Cruise Configuration forms or paid for by the Principal Investigator.

## 5. MEALS AND CLEANING

The R/V F.G. WALTON SMITH provides all meals aboard. If there are special requests, i.e. dietary restrictions, vegetarian meals, etc., the scientific party must submit such requests in writing at least two weeks prior to the cruise. We are happy to accommodate special needs but we need the advance notice to plan for this. Meal times will be posted.

The Chief Scientist is responsible for assigning specific duties to the scientific party for all areas to be cleaned which include scientific staterooms and heads/showers and laboratories. Please notify the ship's crew of any hazardous conditions such as a wet floor or spill.

A washer and dryer are located at the base of the stairs in the starboard hull. Laundry detergent will be provided. Please transfer laundry from the washer to the dryer as soon as it is finished and remove clothes from the dryer as soon as they are dry to prevent a fire hazard..

## 6. GARBAGE AND TRASH

In accordance with Federal Regulations the R/V F.G. WALTON SMITH has a Waste Management Plan for control of all waste material. Please take a few minutes to become familiar with the plan as follows:

- a. All plastics will be separated and held onboard for the duration of the voyage. On return to port this will be disposed of in a designated container.
- b. During operations beyond 12 nautical miles from shore, organic garbage (food "slops") may be disposed of overboard.
- c. During operations within 12 nautical miles from shore, all garbage will be held onboard. Upon return to port, the garbage will be disposed of in a designated container in accordance with U.S. Department of Agriculture regulations.

The crew and scientific party, prior to the beginning of the cruise, will review the waste management plan. Please refer to the Pollution Prevention placards posted in the mess area and throughout the vessel. **IT IS ILLEGAL FOR ANY VESSEL TO DUMP PLASTIC TRASH ANYWHERE IN THE OCEAN OR NAVIGABLE WATERS OF THE UNITED STATES.**

## 7. BERTHING

The R/V F.G. WALTON SMITH is designed to carry a scientific party of up to 13 persons with a 7 person crew. Any addition to the crew for any purpose will require a reduction in the number of the scientific party. The Chief Scientist will assign berths to the scientific party. Special attention should be given so that there is no sharing of cabins between male and female cruise participants. Berthing for the scientific party will normally be available the night before the scheduled departure.

## 8. SAFETY AND RESPONSIBILITIES

The Master, by Maritime Law, has paramount authority over all persons assigned to or embarked on the ship. The Master has full responsibility for the safety of the vessel and all personnel aboard. The Master is vested with the authority to take whatever action he deems necessary to preserve and maintain the safety and integrity of the vessel and all personnel, including but not limited to; handling of small craft; diving and/or snorkeling activities; weather; navigation hazards, and machinery malfunctions. Enforcement of policy, safety standards, and compliance with the laws of the territorial waters in which the vessel is operating is the sole responsibility of the Master.

Violations or circumvention of safety standards or local laws may cause termination of the cruise and immediate return of the vessel to RSMAS. The Master will make determination of violations or circumvention. The Chief Scientist is required to advise the Master of all-special permit licenses, clearances, etc., issued to the project regarding the collecting of data or other scientific activities.

The Master is required to provide information, orientation and demonstrations of the safety equipment and emergency procedures aboard the vessel. This will be combined with a fire and abandon ship drill which will be held shortly after departure and all embarked personnel are required to participate. Life jackets must be worn at all drills. Your assignments for all drills and emergencies are listed on the station card located on your bunk.

All accidents and/or injuries must be reported to the Master as soon as possible. The Master is required to report all personnel casualties to MedAire, Inc.

The RVOC SAFETY TRAINING MANUAL is aboard and available for review. Chapter 1, the Science Party supplements, highlights safety matters, which pertain to all embarked scientific personnel and is required reading. Additionally, all scientific personnel should be aware of the contents of the safety manual and refer to the appropriate section(s) for specific scientific operations. The SAFETY TRAINING MANUAL may also be viewed at [http://www.gso.uri.edu/unols/safe\\_man.html](http://www.gso.uri.edu/unols/safe_man.html).

## SECTION E PRE-CRUISE REQUIREMENTS

### 1. SHIP TIME REQUESTS

When it comes to shiptime requests the earlier the better; this is beneficial to all concerned. There are some requests that take more time than others to prepare for and we want to make sure that all science parties have the proper level of support from our department. Please do not hesitate to contact us with any questions before submitting Ship Time Request forms.

### 2. CONFIGURATION FORM

The Ship's Configuration Form is designed to inform the Marine Department of the requirements of the Principal Investigator (PI), and more than any other document, has the most impact on the success of the cruise. As the resources of the Marine Department are limited, early submission will allow proper preparation of requested equipment and in many cases allow modifications and/or additions of new equipment. The PI is urged to provide the requested information as soon as possible. If all information relative to the project is not known it should be marked "preliminary". The principal investigator must submit a final Configuration Form no later than 45 days prior to the cruise to allow for proper action. The date of submission of this form serves to resolve equipment request conflicts. Most portable equipment is designated as "Shared Use" and may be in use on another vessel.

### 3. PERSONNEL FORM

This form is available from the RSMAS Marine Operations Office and should be submitted once the science party is absolute. It serves as a record of all persons on board and is submitted to the UNOLS Office post cruise. The form should include proper title (Dr. or Ms.), spelling of names and cruise category/functions (i.e. graduate student, observer, etc).

### 4. SCHEDULING

Ship scheduling at the University of Miami is done by the RSMAS Marine Operations Office and coordinated with other institutions through the UNOLS Ship Scheduling Committee. Priorities for specific dates are based on the date the Ship Time Request form is received by the Marine Operations Office.

## 5. FINANCING

Investigators holding Federal agency grants or contracts may be awarded ship time where costs are included in the Ship Operations Grant or in contracts between those agencies and the University of Miami. Other investigators should include ship costs, as determined by the RSMAS Marine Operations Office within their grant budget. Commercial users will operate under a Charter Party Agreement at a slightly higher rate as sponsored users.

## 6. FOREIGN OPERATIONS

The Principal Investigator is required to furnish the Marine Operations Office a Cruise Prospectus and Foreign Clearance Form when a cruise is planned requiring collection of data in foreign territorial waters. Please consult the UNOLS HANDBOOK FOR INTERNATIONAL OPERATIONS OF U.S. SCIENTIFIC RESEARCH VESSELS for the proper procedures for requesting foreign clearances. The Marine Operations Department will assist with the securing of clearances with the United States Department of State but **it is ultimately the responsibility of the Principal Investigator to secure this clearance.** **It is extremely important that these forms be submitted in time to allow the State Department to comply with the specific lead-time required by the host country, which may be as much as six months or more in advance.**

## 7. PERSONNEL INSURANCE REQUIREMENTS

The Chief Scientist has the authority to determine the makeup of the scientific party and the responsibility to assure compliance with University of Miami policy. Personnel joining the scientific party must have a legitimate reason for participating in said cruise by association with the scientific program as a researcher, research assistant, technician or student. University of Miami/RSMAS students are allowed to embark on RSMAS vessels. Visiting investigators and students from other U.S. institutions embarking on RSMAS vessels must be covered by their institutions workman's compensation insurance. All self-employed personnel or volunteers invited to participate on RSMAS cruises must be employed by the Chief Scientist's or Principal Investigator's home institution. The Chief Scientist will be responsible for providing proof of insurance for each cruise participant. If there are any questions about insurance requirements please contact the RSMAS Marine Operations Office

All individuals who will participate in a cruise aboard the R/V F.G. WALTON SMITH are required to supply a certificate of insurance, Governmental Travel Orders, or a letter from their employer certifying coverage for Worker's Compensation. Such coverage should be provided for the named individual(s) for the duration of the cruise.

Self insured institutions may use the letter format (see sample document) included with the document package to comply with the above stated requirements. Certificates and letters must be submitted to the University of Miami Risk Management Office at least **two weeks prior** to the scheduled sailing date. Send information to Marine Operations for forwarding to Risk Management. The mailing address is as follows:

University of Miami  
Marine Operations  
4600 Rickenbacker Cswy.  
Virginia Key, FL 33149

## 8. CUSTOMS AND IMMIGRATION

All participants scheduled to visit foreign ports must be cleared with the U.S. Immigration Department and must meet all foreign nation customs, immigration, and immunization regulations. The Scientific Personnel Information & Immigration Form provides the information necessary for the issuance of this clearance.

Upon return from a foreign port, all vessel personnel including the scientific party are required to remain aboard the vessel, without any contact with persons ashore, until U.S. Customs and Border Protection (CBP) officials clear the ship. Individuals are responsible for declaring to CPB all articles purchased or acquired in foreign ports during the cruise. Any person leaving the ship prior to the first return to an U.S. port after a foreign port call must take all dutiable articles with them. Personal items of high value and obvious foreign manufacture (cameras, video recorders, stereos, watches, etc.), should be registered with CBP prior to departure on Customs form 4457, Certification for Personal Effects Taken Abroad.

[http://forms.cbp.gov/pdf/cbp\\_form\\_4457.pdf](http://forms.cbp.gov/pdf/cbp_form_4457.pdf)

Please note, a CHECKLIST OF REQUIRED FORMS can be found at the end of this manual.

## SECTION F WHILE ABOARD

### 1. RESPONSIBILITIES OF CHIEF SCIENTIST

The Principal Investigator may be the Chief Scientist or a member of the scientific party may be designated as Chief Scientist for the cruise. This person will be responsible for the coordination of the entire scientific mission.

The Chief Scientist is urged to work and communicate on a daily basis with the Master to solve any problems that may arise during the cruise. Problems are not limited to the scientific objectives but encompass all phases of the ship's operation and performance.

The Chief Scientist governs the personal conduct of the scientific party; however, the Master has the final responsibility for the operation of the ship and well being of all persons aboard. Because of this, he also has final authority over all operations and personnel aboard.

### 2. PERSONNEL RESPONSIBILITIES

**Sexual Harassment** The R/V F.G. WALTON SMITH can be a small vessel with 20 persons aboard, especially on cruises of 10 days or more. Because of this, personal conduct such as etiquette and cleanliness become very important to the harmony and consequently the success of the cruise.

Privacy is greatly reduced, and as a result, interactions can become more intense. With both males and females onboard, feelings of intimacy can be more quickly established, creating incidents, planned or unplanned, that can take on exaggerated importance. In general, everyone should be sensitive to the altered social conditions and atmosphere in which all must work and live.

Sexual awareness and tensions can be heightened at sea. Anyone aboard ship may be subject to more intense or excessive attention, welcome or not, than he or she might experience ashore. This attention can be magnified to the point of sexual harassment.

In the event that a member of the scientific party or crew feels that their personal rights have been abused, the offender should be informed immediately. This action is of particular importance in cases of possible sexual harassment. While common sense and good judgment are the best guides, the individual may find it also appropriate to speak with the ship's Master and/or the Chief Scientist.

In the case of overt sexual harassment, it is the aggrieved person's right and obligation to report the offense. As an assault upon the individual's rights and dignity, it is clearly

inconsistent with, and unacceptable to, the standards of the University of Miami.

Should you receive a report of harassment as Chief Scientist, it is important that it be handled decisively and in a manner in agreement with the University's Personnel Practices and Procedures. Sexual harassment is defined as unwelcome sexual advances, request for sexual favors, and other verbal or physical conduct of a sexual nature which has the purpose or effect of unreasonable interference with an individual's work performance or creates an intimidating, hostile, or offensive work environment. It is in violation of the Civil Rights Act and the University of Miami Policies and Procedures.

Failure of a supervisor to take immediate, appropriate action where it was known, or should have been known, that a case of inappropriate conduct existed, will place that supervisor in serious jeopardy should future legal action be warranted.

**Dangerous Items** Sheath knives, guns and spear guns are not permitted aboard the R/V F.G. WALTON SMITH.

**Fresh Water** Fresh water can be limited, especially in areas where the operating waters restrict the use of the ships water making equipment. Please make every effort to conserve.

**Smoking** Because of the limited space aboard the R/V F.G. WALTON SMITH smoking is permitted only on the after deck. Please be aware of no smoking areas such as near fuel stations and storage. Please do not throw tobacco waste over the side of the vessel at any time. Receptacles are available on the aft deck.

**Nighttime or Foul Weather** At night or in foul weather extra caution should be observed. Whenever possible, do not go out on deck alone, and never ever go out on deck without informing some other member of the crew or scientific party.

**The Bridge** Please request permission to enter the bridge while underway, preparing for departure, during anchoring procedures, or while entering a harbor or channel. These are usually busy times on the bridge. When entering the bridge at night make sure that you will not introduce unwelcome light which can interfere with the watch standers night vision.

**Engine Room** Except during an emergency; never enter the engine room area without the company of one of the crew while underway. It is a noisy, hazardous area and it is easy for inexperienced personnel to injure themselves.

**Drugs and Alcohol** The possession or use of alcoholic beverages, narcotics, or any illegal drugs is strictly prohibited. The University of Miami supports the ZERO TOLERANCE policies of the U.S. Customs Department and adheres to the STRICT ENFORCEMENT of these policies. In the event that illegal drugs are found aboard the vessel the Master is instructed to immediately notify federal authorities, terminate the voyage, and proceed to the nearest U.S. port.

**Illness** Please do not come aboard if you are ill and there is a chance of infecting others with a contagious disease like a cold or the flu (influenza). The Master is entrusted with ensuring the safety and well being of everyone aboard and has the authority and responsibility to deny passage to anyone that is suspected of being ill with a contagious disease. It can quickly become a miserable cruise when one sick person comes aboard and gets everyone else sick.

**Deployment of scientific gear. No scientific gear is to be deployed over the side without first getting permission from the bridge.**

### 3. MOVING ABOARD

While the vessel is located at RSMAS or Dodge Island, the scientific party will normally be allowed aboard the evening prior to the scheduled sailing date. It is the responsibility of the Chief Scientist to assign berths to the scientific party (Refer to Section D.7. BERTHING). The Chief Scientist will post a berthing plan in the dining area for use. Bed linen, towels and washcloths will be provided and exchanged on a weekly basis. Please stow your personal gear carefully in the lockers provided. No food preparation will be allowed until the morning of the scheduled departure date. No alcoholic beverages are allowed aboard the vessel. If liquor is purchased in a foreign port it must be surrendered to the Master until return to Miami and declared to Customs. Please do not take food to your stateroom. One item that is often forgotten and usually required is sunscreen and other sun protection gear. Don't get sunburned. There is TV with a DVD player in the dining area. You are welcome to bring some of your own favorite movies to share with others in the galley area.

### 4. EMERGENCY & SAFETY EQUIPMENT

After locating your stateroom and stowing your personal gear please take a few minutes for the following:

1. Locate your life jacket.
2. Locate the inflatable life rafts.
3. Locate all escape routes, doors & hatches.
4. Locate fire extinguishers throughout ship.
5. Locate work vests and hard hats.
6. Locate the First Aid Kit.

The R/V Walton Smith carries a complete complement of medical supplies appropriate to a vessel this size and the crew is trained to deal with most common emergencies.

## SECTION G POST CRUISE REQUIREMENTS

### 1. SHIPBOARD CLEAN-UP PROCEDURES

In order to provide clean living quarters and laboratories for the next scientific party it is necessary that each occupant clean their stateroom, adjoining bathroom, and laboratory facilities before leaving the ship. These areas will be in clean condition before the scientific party arrives and are to be cleaned at the end of the cruise. Scientific freezers and refrigerators are to be wiped down once samples are removed. Since it is usual for up to 4 persons to share each head/shower it requires very little time per person to put these areas back to clean condition for the next group of scientists who will often be coming aboard immediately after the current group departs. Therefore, at the conclusion of the cruise, all areas used by scientific party must be cleaned as described below prior to departing the vessel. The crew will furnish cleaning equipment and supplies.

- a. Laboratories: Remove all scientific equipment, empty trash cans in proper receptacles, wipe down bulkheads with damp cloth and dry with clean rags, sweep and mop deck, wipe off benches, cabinets, scour sinks and faucets.
- b. Staterooms: Strip bunks and deposit towels and linen in furnished laundry bags, wipe down furniture and bulkheads, fold blankets and put them at the foot of the bunk.
- c. Heads and showers: Swab out toilets and wipe down outside of bowl, scour sinks, clean mirror, soap dish, and faucets, wipe down shower bulkheads and deck, sweep and mop deck and empty wastebasket.
- d. Passageways, stairs: Sweep and mop.

The Master is responsible for inspection of these areas prior to departure of the scientific party. That is why you found a clean vessel when you arrived so please assist him with this task.

### 2. OFFLOADING

The R/V F.G. WALTON SMITH will normally be offloaded on the day of return to Miami. When the ship returns to the RSMAS facility the ship's crane will be available to assist in the offloading. Normally, the crew will not be available to assist in the offloading except for operation of the ship's crane or if a forklift is needed.

### 3. DISEMBARKING

The scientific party is expected to leave the vessel within a logical time frame after arrival at the RSMAS dock. Meals will be served as appropriate depending on arrival time.

### 4. POST CRUISE FORMS AND REPORTS

#### a. CHIEF SCIENTISTS POST CRUISE ASSESSMENT (PCA) (UNOLS)

This form is used by UNOLS to assess the degree of success achieved in accomplishing the cruise's scientific objectives from the PI or Chief Scientist's perspective. It is filed online with UNOLS at the following address:  
<http://www.gso.uri.edu/cgi-bin/pcget.cgi>

The Chief Scientist is requested to complete the form as soon as possible after the end of the cruise. It will be disseminated to all involved including UNOLS, funding agency, Marine Department, Marine Technical Department and will serve as a historical record of the cruise. Please contact the Marine or Marine Technical contacts for proper cruise number. Further, the Ship Operations Subcommittee uses these reports to further evaluate the ship's operation and capabilities.

#### b. CAPTAINS POST CRUISE ASSESSMENT (PCA) (UNOLS)

This form is used by UNOLS to assess the degree of success of the cruise from the Master's perspective. The Master completes this form online at the end of each cruise. It will be copied to the PI and the Marine Operations Department.

## FORMS

- I. Inventory of Shared-Use Instruments
- II. Ship-time Request Form (UNOLS)
- III. R/V F.G. WALTON SMITH Configuration Form and Cruise Plan (RSMAS)
  - Contact Information
  - General Cruise Information
  - Funding Status
  - Billing Information
  - Equipment Request List:
    - Section I. Sampling, Data & Nav. Systems
    - Section II. Laboratory Equipment & Systems
    - Section III. Communications (Special Requirements)
    - Section IV. Shipboard Scientific Support Equipment
    - Section V. User-Supplied Equipment
- IV. Scientific Personnel Immigration Information Form (RSMAS)
- V. Certificate of Self Insurance (RSMAS)
- VI. Radionuclide Use (RSMAS)
- VII. Dive Plan (RSMAS)
- VIII. Cruise Prospectus (UNOLS)
- IX. Post Cruise Assessment Form (UNOLS)  
<http://www.gso.uri.edu/cgi-bin/pcget.cgi>

**All forms listed above are available upon request from the Marine Department**