



NOAA Teacher at Sea
Barney Peterson
Onboard NOAA Ship RAINIER
August 12 – September 1, 2006

NOAA Teacher at Sea: Barney Peterson

NOAA Ship RAINIER

Mission: Hydrographic Survey

Day 11: Thursday, August 24, 2006

Weather Data from Bridge

Visibility: 8 nm

Wind direction: 300° true

Wind speed: 15 kts (gusts to 50 kts)

Sea wave height: 2 ft

Seawater temperature: 9.4°C

Sea level pressure: 1003.5 mb

Cloud cover: Cloudy

Science and Technology Log

One very important aspect of working on the RAINIER is communication. To get the job done everyone needs to communicate clearly and effectively. This extends into every part of working and living on the ship. Communication is by voice, flags, and hand signals. People talk face-to-face, by radio, bells, Public Address system, posted notices, and by email. For every form of communication there are certain “right” ways to participate.

Voice communication is much more formal on the bridge where orders and responses have to do with running the ship. When a command is given by the Conning Officer or the Officer of the Deck, it is repeated by the person to whom it was given followed by the response, “aye.” That person then repeats the command again to indicate it has been accomplished, and the person who gave the order acknowledges that by saying “Very well.” Since there are often at least two people carrying out different commands on the bridge at the same time, it is very important that this procedure is followed so the person in charge knows that orders have been heard and followed.

When members of the Deck, Engine, Survey, or Galley crews address the NOAA Corps officers and department heads on the ship, they call them by rank and name, or just by rank. The Commanding Officer is always addressed as “Captain” or “CO,” and the Executive Officer is always addressed as “XO” or by rank and last name. Department heads should be addressed as “Chief.” This formality helps avoid confusion in following the chain of command, the organization that keeps the ship running smoothly.

Flags are used as signals to people off the ship about what is going on. At anchor a Union Jack is flown on the bow from the jack staff. A black “anchor ball” is raised on

the forward bow stay (line), and the Stars and Stripes flies from the aft mast. The ship's commission pennant always flies from the forward mast. When the ship is refueling, a red flag is flown from the forward mast on the port side. When the ship is under way, a smaller-sized Stars and Stripes and the NOAA service flag are flown. Our nation's flag is always flown from the aft mast and the service flag is on the forward mast. Other special flags are flown when certain VIPs come on board and are taken down when they leave.

The ship's radios are used for important voice communication. The protocol is for the speaker to give the call sign (code) for the person to whom they are speaking, followed by their own identifying call sign. Communication via radio is very direct, in as clear language as possible, and *never* uses the civilian law-enforcement 10-code language. To indicate that a person has received and will comply with a message, the response is "Roger." These radio communications are very important on the RAINIER during the day when survey boats are working away from the ship on hydrographic surveying. It is important for the boats and the ship to stay in touch for both safety and efficiency.

When survey boats are being lowered or raised to the ship or when the anchor is being raised crew members reinforce voice communication with specific hand signals as well. When launches (survey boats) are being raised and lowered a closed fist means "Stop!" The index finger on a closed hand pointing up or down shows the direction for winches to move the boat. Different signals are used for operating the cranes on the bow and stern of the ship, using the thumbs, and different motions of the hands with either the index finger, or the first two fingers extended. It is important for all crewmembers to understand the signals and watch for them because machinery is sometimes noisy, making it hard to clearly hear voice commands.



Seaman Surveyor Erik Davis signals "Stop" with a closed fist while boat RA-3 is being lowered to the water.

It is very important for everyone on the ship to learn the bell signals that are used. They are to alert the officers and crew to emergencies and they demand immediate responses. Upon coming aboard the ship, each person is given a safety briefing and assigned emergency muster stations for response during drills and emergencies. When the alarm bell rings (or the ship's whistle sounds) 7 short and 1 long, followed by the announcement "Prepare to Abandon Ship" on the PA system, all personnel report immediately to their Abandon Ship stations wearing a jacket, long pants and a hat, and carrying their survival suit and whatever specific supplies have been put on the personal

assignment. At least once each cruise there is a drill when everyone dons their survival suits and checks whistles, zippers and lights to be sure they are working.



TAS Peterson in her survival suit during an Abandon Ship drill. The wind was gusting up to 30 knots so we reported to our indoor donning stations.

The Fire/Emergency signal is a continuous sounding of the ship's bell (or whistle) for at least 10 seconds, followed by an announcement about the specific emergency. All personnel must immediately report to their muster stations wearing their floatation (Mustang) coats. The person in charge at a muster station accounts for each person and reports that all are or are not accounted for. The radio is used to dispatch particular crews to their assigned Fire/Emergency responsibilities. Dismissal is by 3 short whistle blasts or bells followed by the announcement "Secure from fire/emergency."

Three long bells or whistle blasts followed by the announcement "Man Overboard, port/starboard side!" is the signal for all personnel to report to Man Overboard muster stations immediately. This enables roll to be

taken to identify who is missing and emergency recover procedures to be initiated.

All of these signals, whether for drills or actual emergencies, are taken very seriously. Everyone practices the drills at least once per week so that the ship's personnel can respond immediately with the least possible confusion.

The other two forms of communication used on the ship are posted notices and email messages. Each person on the ship has an email account with a NOAA address. The CO regularly posts bulletins of general interest such as the weather forecast, general orders, or information from fleet headquarters on policy and procedures. Officers and crew use the email for interpersonal communications and it is also available for limited personal use. There are notices posted regularly on the ship's bulletin boards that all personnel are responsible for reading. These include the Plan of the Day (POD: work schedule and assignments) and more general schedules such as hours the store and the dispensary are open. The menus for meals are posted in the mess and the movies being shown are listed each evening.

Each of these forms of communication is very important to the people aboard the RAINIER. It is impressive to see how well they work. Nobody mumbles or takes shortcuts. I have not heard anyone answer "uhn-hunh" or "uhnt-unh" nor have I seen anyone respond to another person with headshakes or shrugs.

Personal Log

Today the weather was windy and wet as a low pressure system passed over us. The storm actually started last night and got pretty rough. We were anchored in a sheltered bay so we didn't get the worst of the winds. Even so, there were gusts up to almost 60 knots. I woke up several times hearing the anchor chain rub loudly against the hull as the wind spun the ship around. The movement of the ship was pleasant to sleep to.

This seemed like a great morning to catch a nap as I had been up really late last night cleaning fish. I had just settled in to sleep when the Fire/Emergency bell sounded. (At first I thought recess was over!) I jumped off my bunk, grabbed my coat and hat, and was half-way outside when they announced we should disregard the bell, there was no emergency. About an hour later, the bell rang again and it was an F/E drill for real so I grabbed my Mustang coat and sped to my muster station on the fantail. We were outside in the very fresh air for about 20 minutes while they accounted for all personnel and completed the steps of drill.

Just after lunch there was an Abandon Ship drill and we were told to report to our "indoor donning" areas to put on survival suits and check that all parts worked properly. I struggled into my "Gumby" suit, stretched on my fleece hat, blew on my signaling whistle and flipped my strobe light on and off. Everything worked fine. Those suits are very warm when you are inside and I was really happy to take it off and repack it into its carrying bag.

Question of the Day

What is the temperature of the water in degrees Fahrenheit in the Gulf of Alaska if the daily log reports it at 9.4°Celsius?

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