FOCUS

Keeping a Crew Safe in an INDUSTRIAL SETTING

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Here's my rule of thumb: If it looks industrial (lots of extra equipment around), sounds industrial (loud hazards to hearing everywhere), and smells industrial (noxious odors present), then it's industrial. And you can bet whether we're talking about a selected restricted availability (SRA) or a continuous maintenance availability (CMAV), I treat it as industrial and make sure the crew is prepared.

When I reported as the operations/safety officer on board USS *Samuel B. Roberts* (FFG-58), I had to catch up on the latest acronyms, starting with the two preceding ones. I quickly learned that an SRA is a CNO-designated time period, approximately two to three months long, for a very large maintenance and repair package. A CMAV, on the other hand, is a two-to-three-week period between operational commitments, in which maintenance items needed to meet those commitments are completed. The ship and immediate superior in command schedule a CMAV.

An SRA entails a large range of preparations. A good safety officer plans events, such as a safety stand-down, and invites shipyard personnel to talk to the ship's leadership. He or she participates in daily safety walk-throughs with shipyard project engineers. These walk-throughs ensure PPE (personal protective equipment) is used daily, hot-work is documented, fire watches are posted, and quick disconnects are used on hoses penetrating fire boundaries.

Any command should recognize that a crew's comfortable existence is about to change dramatically when faced with an SRA. Crew members regularly need the safety officer to remind them about the warnings available for quick download from the Naval Safety Center's website.

Now let's compare this process with how you prepare for a CMAV. A good safety officer plans an in-brief for the maintenance team to get together and discuss the work to be accomplished over the next two to three weeks. He or she also drafts POD notes on PPE and various advisories on what to watch out for during this small-scale maintenance period. There are no hard requirements to prepare the crew for safety during a CMAV; instead, it's up to the imagination of the command. A CMAV isn't considered an industrial environment, but is it?

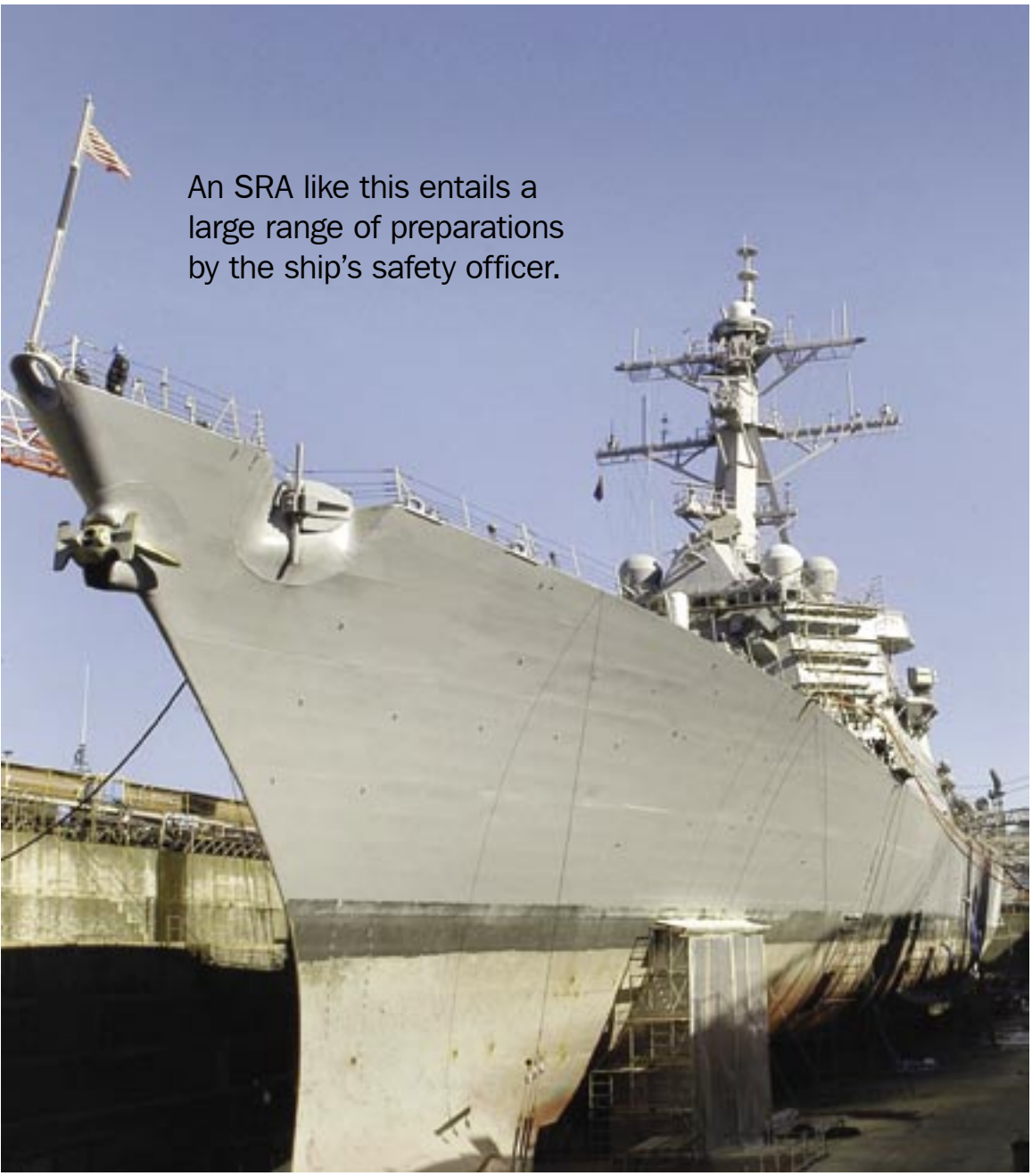
In February 2006, a NavSea preservation team arrived on board *Samuel B. Roberts* to commence stripping the bilge area of auxiliary room No. 2. The work was to be done in view of the No. 2 fire pump—under it, to be exact. Contractors didn't identify any tagout requirements as a precursor for their operation. The No. 2 fire pump, at this time, was secured.

The contractors erected curtains to contain the dust generated by the grinding. They also provided ventilation to the space and stationed services on the pier to support their maintenance. Hoses led from the affected space to pierside. Does this picture sound industrial to you?

A week later, high demand on the ship's firemain drove pressure low, so the watch in damage-control central opted to start the No. 2 fire pump. No restrictions were in effect for operating this pump. Personnel followed engineering operational sequencing system (EOSS) and stand-clear procedures while they issued start-up warnings.

About an hour later, a contractor began extricating himself from underneath the deck plates where the grinding work was taking place. He lost his balance and extended his left hand under the No. 2 fire pump's coupling guard while trying to maintain his balance and partly severed three fingers. He also suffered a compound fracture to a fourth finger.

This mishap could have been prevented. As our schedules appear to become more compressed, continuous maintenance availabilities are being populated



An SRA like this entails a large range of preparations by the ship's safety officer.

Navy photo by PHAN Patrick L. Heil

with maintenance of increasingly industrial climates. During the CMAV referenced earlier, ship's force, SERMC (Southeast Regional Maintenance Center), and three contractor groups were working on board. Although this climate doesn't control the whole ship, shipwide awareness still is required to safely complete CMAVs. How do we encourage shipwide awareness? Here are some recommendations USS *Samuel B. Roberts* enacted:

There must be a more formal flow of info from ship to contractors. Even though the contractors may not be working on the affected gear, they need to be notified to promote situational awareness. To do this, contractor supervisors should meet with ship's force daily to verify operating conditions and safety precautions at the work site. This gathering gives ship's force the chance to brief contractors on any potential changes to configurations—just like we all do during an SRA.

Command duty officers and duty safety petty officers should walk through identified work areas daily. Safety reps from each contractor should accompany them.

Remind leadership at officer's call of industrial items in progress. Explain the hazards they pose to the crew and maintenance team.

Consider tagging out items based on proximity to major work. Do this even though the items are not directly affected physically.

The author was assigned to USS Samuel B. Roberts *when he wrote this article.*

Resources:

- Guide to Safety in an Availability, http://www.safetycenter.navy.mil/afloat/surface/downloads/availabilityguide.doc
- ShipMain Modernization Process, http://www.fmp.navy.mil/fmpactive/businesspolicy/FMPDocuments/shipmain.htm
- ShipMain—Providing Optimal Fleet Maintenance Solutions, http://www.navsea.navy.mil/innovation_template.asp?txtDataID=8959
- ShipMain: The Changing Face of Ship Maintenance, http://www.navy.mil/search/display.asp?story_id=15082