COMNAVSURFLANT on PHM's

VADM John D. Johnson, Jr.

Photos by PH2 M.K. "Keith" Monroe

Admiral Johnson, the first PHM, USS *Pegasus*, is presently homeported in Key West, Florida. Are the other PHM's now in production going to join *Pegasus* there, and if so, about when?

All six PHM's will be based in Key West. The next five will come to Key West between October '81 and July '82. My present intention is to have PHM's 3 and 4 transit together from the West Coast to arrive in Key West in the spring of '82.

PHM's 2, 5 and 6 will arrive there in the winter of '82. By the end of that year we will have all six PHM's homeported in Key West. Some of the families of the next ships are already settled in Key West since we have some of the crews in training already.

You're working with one PHM, Admiral, that has been more or less operational since 1978 and I'm assuming that we've learned some valuable lessons in that period. What do you see as the main tasks to be accomplished to ensure that a successful introduction is made of the follow-on ships, *Taurus* and the others which, as you say, are going to be reported in 1982?

Well, the main task has already been completed, that is, to learn from the PHM 1 those things you normally will learn from a prototype. We have, for example, learned some very valuable lessons about foil construction. We've learned a great number of lessons concerning the engineering plant. These and other lessons, have been incorporated into all five production model PHM's, and will, of course, be retrofitted into the *Pegasus* sometime down the line. So the main lessons have been learned and incorporated.

The next thing that we must do in bringing the PHM's into the fleet is to give these ships more responsive and comprehensive supply support. We've got to get a better handle on reducing the turnaround time on refurbished parts and we must increase the Navy-wide inventory of spares. We've got to work off those rough edges that you would expect in any new logistic support system. Specifically, the mobile logistic support group with its 73 vans has yet to be fully tested. We don't have all the support vans as yet and those now at Key West are prototype.

The other thing, of course, is to be sure that when the production model ships arrive in LANTFLT we have the tactics developed for them and that we have tried them out as much as possible with PHM 1.

I was interested, Admiral, to see that incorporating lessons learned from the prototype was the first thing you cited because some surface warfaremen are of two minds about the PHM's. Most see them as one of the hottest and most exciting ships since WWII PT's—small, fast, but with a giant killer punch. On the other hand, I think there is some concern that these ships might be cranky and so highly technical that surface warfaremen might be a little bit wary of duty in them or of relying on them. Do you think they should be?

No, I don't think they should be because the concept of "fly before buy" has proven itself in the past to be the way to go in a sophisticated ship of this type. With prototypes, you learn the lessons early and you apply them. I'm confident that the application of the lessons we've learned has solved many of the problems that we've experienced with *Pegasus*.

The production models will certainly be better because of what we have learned. Now there is no question that some of the lessons learned with *Pegasus* have been tough ones, but the performance of *Pegasus* has been exceptional despite these problems. The ship has done very well, no question about that, and *Pegasus* has been very successful in fleet exercises, including exercises with the battle group under SECOND Fleet.

Let me make this point. The PHM is an exciting ship

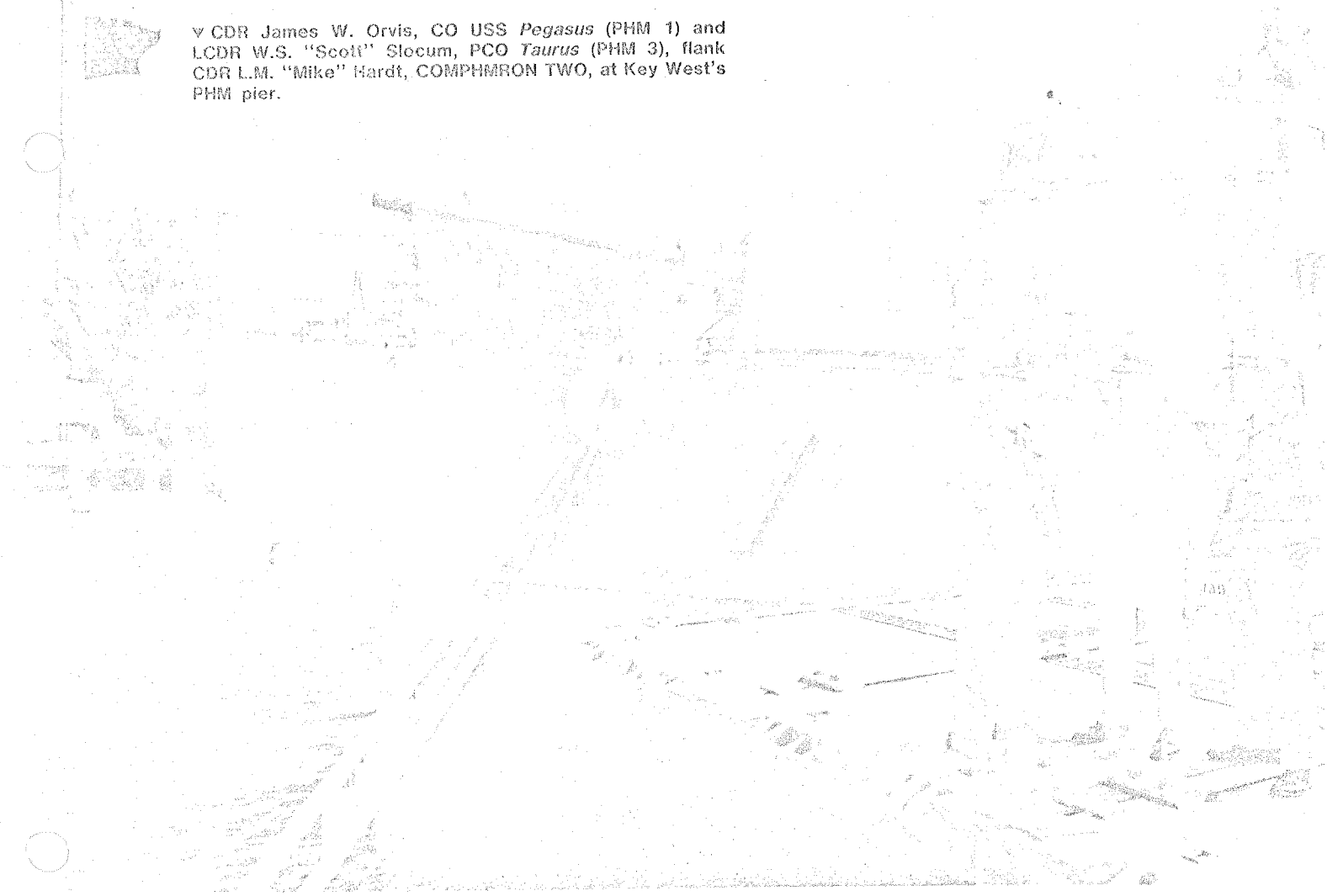
but I think we have to be careful in comparing it with the WWII PT boat. Although it has many of the PT's good characteristics it does in fact have an offensive punch far greater than the WWII PT boat. The difference of course rests in the Harpoon with its capability for major warship mission kill over the horizon.

Admiral, I know there is a particular effort necessary to get personnel who are assigned to a new type of ship up to speed. What is the pipeline—the training—for the PHM's? Can we get the men up to handle this new technology?

Yes, we can. The reason I feel that way is the very strong effort we're making, in coordination with the contractor, to provide the kind of classroom and hands-on training in the areas of technical knowledge as well as oper-

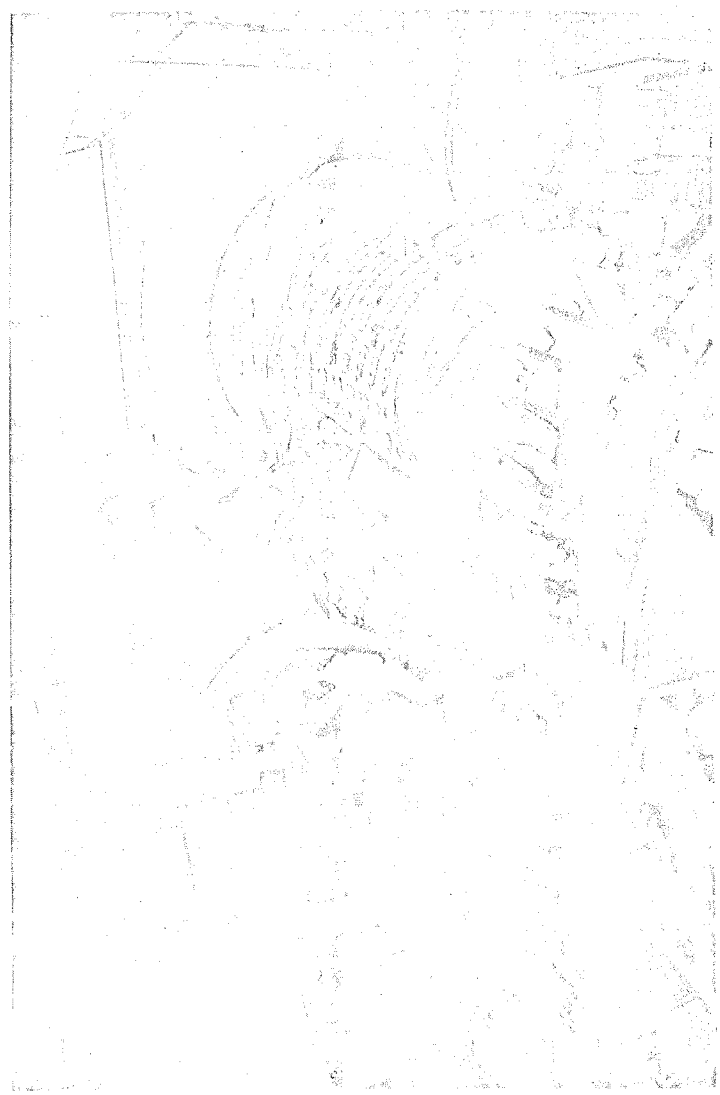
▶ PHMRON TWO MLSG repair department members GSM2 David H. Jones, GSM3 David J. Herron, LT Joe E. Callaway, and GSM1 Dennis L. McCool, working inside an MLSG van, troubleshoot the transfer gearbox removed from the ship's service power unit (SSPU) of *Pegasus*.

▼ CDR James W. Orvis, CO USS *Pegasus* (PHM 1) and LCDR W.S. "Scott" Slocum, PCO *Taurus* (PHM 3), flank CDR L.M. "Mike" Hardt, COMPHMRON TWO, at Key West's PHM pier.



◀ EW2 Kenneth D. Dalton of *Pegasus* (center) indoctrinates *Taurus* crew members OS1 Michael J. Holt and ET2 Ferdinand F. Watzecha in the operation of the Harpoon weapons control console in the *Pegasus* combat information center.

▼ GSM2 James E. Richardson and GSM3 Robert B. King, USS *Pegasus* (PHM 1), conduct hands-on LM 2500 GTM training for *Taurus* (PHM 3) crew members IC2 David S. Ewert (left) and GSE2 Dirk A. Breeden. They are in the gas turbine machinery space aboard *Pegasus*.



ational knowledge that we need in order to get these new ships on the line quickly. The current training is extensive. We have four instructors permanently attached to the mobile logistic support group, for example, and they are currently training the crews of both *Taurus* (PHM 3) and *Aquila* (PHM 4) right in Key West.

The pipeline works this way. About three months prior to the crews going to Seattle to join their ships, the contractor will conduct extensive, in-depth training on specific ship systems. Then, on arrival in Seattle, each crew will get about three or four weeks of hands-on underway shipboard training prior to taking control of the ship. That's a big hunk of training. And keep in mind that the PHM crews are carefully selected. They are professionals who are mature both in the leadership sense and in a technical sense. We've had extremely good luck in getting outstanding personnel to go with these ships.

I'm sure that there are plenty of volunteers for PHM duty, Admiral. It seems that this is an attractive, small ship with a lot of the appeal that surface warfaremen have traditionally found in small, highly capable ships.

Yes, they are viewed as a very exciting ship—and they are! The crews certainly feel that way. They are also viewed as very much of a family affair. We've found in the past that small ships generate the kind of tight, team effort that is usually harder to put together in bigger ships.

With a lot of mutual interdependence and cross-training and that kind of thing?

Very much so. And a lot of pride results because each crewman has been challenged, because each knows he is good and each knows he is important.

Admiral, Key West is a place that the surface Navy has been out of for some years now. Was there a particular reason for the selection of Key West as the PHM base? Isn't that a little off the main axis, so to speak, of surface warfare support facilities?

Yes, it is off the main axis and that is part of the reason they're there. Originally, the PHM's were scheduled to be based out of Norfolk—Little Creek. However, we de-

◂ *Taurus* shipmates GMG1 Michael Moore, FTM2 William R. Bohnow, and FTM2 Michael J. Linder familiarize themselves with the *Pegasus* weapons control console.

▾ *Pegasus* engineers GSMC Wayne G. Walker and GSE2 Dirk A. Breeden discuss the port diesel with *Taurus* counterparts (left to right) IC2 Brian G. Snell, GSM2 James E. Richardson and IC2 David S. Ewert.

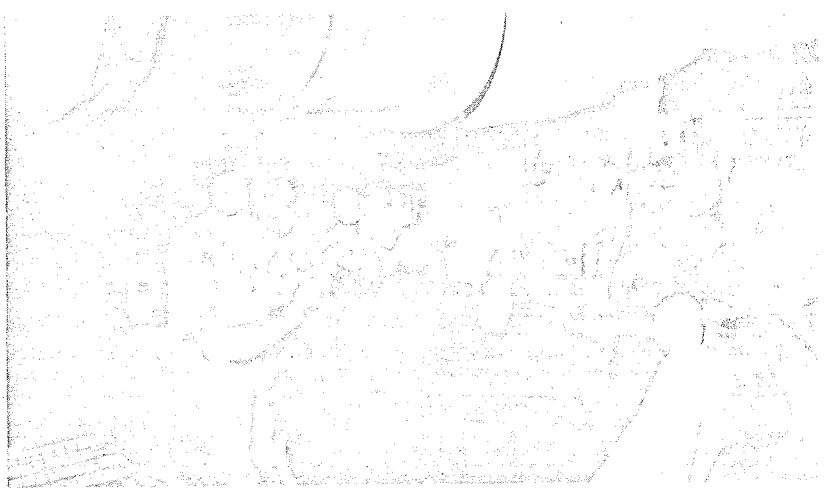
cided that if the PHM squadron was going to be developed into a quick reaction, deployable capability, we could not base it in an area where large amounts of support were already available ashore. If we did that we would never truly develop the stand-alone capability of the PHM's mobile logistic support group. There would always be that all too human tendency to depend on other shore facilities rather than on the mobile group, the group the PHM's must depend on when deployed.

So there's a good, hard military reason for their location in Key West that doesn't have anything to do with the availability of a local pier or something like that?

Absolutely. We wanted to get them down to an area where they have to live off their own resources; where deep roots cannot be established in a big shore establishment; where they can develop the capability to deploy to anywhere in the world on quick notice.

The second powerful reason is that the Caribbean is increasingly a focus of Atlantic Fleet interest and it is a very logical place for a PHM squadron in terms of real world operational requirements. If you take a look at the geography of the Caribbean you will see that the PHM is a very sensible type of response to the threat of, let us say, the Cuban Navy or as a means of supporting a friendly Navy that might need our help. The PHM is superior in its firepower, speed and overall operational capability, for example, to the patrol boats that the Cubans have. So Key West is a most logical area to phase in the PHM's.

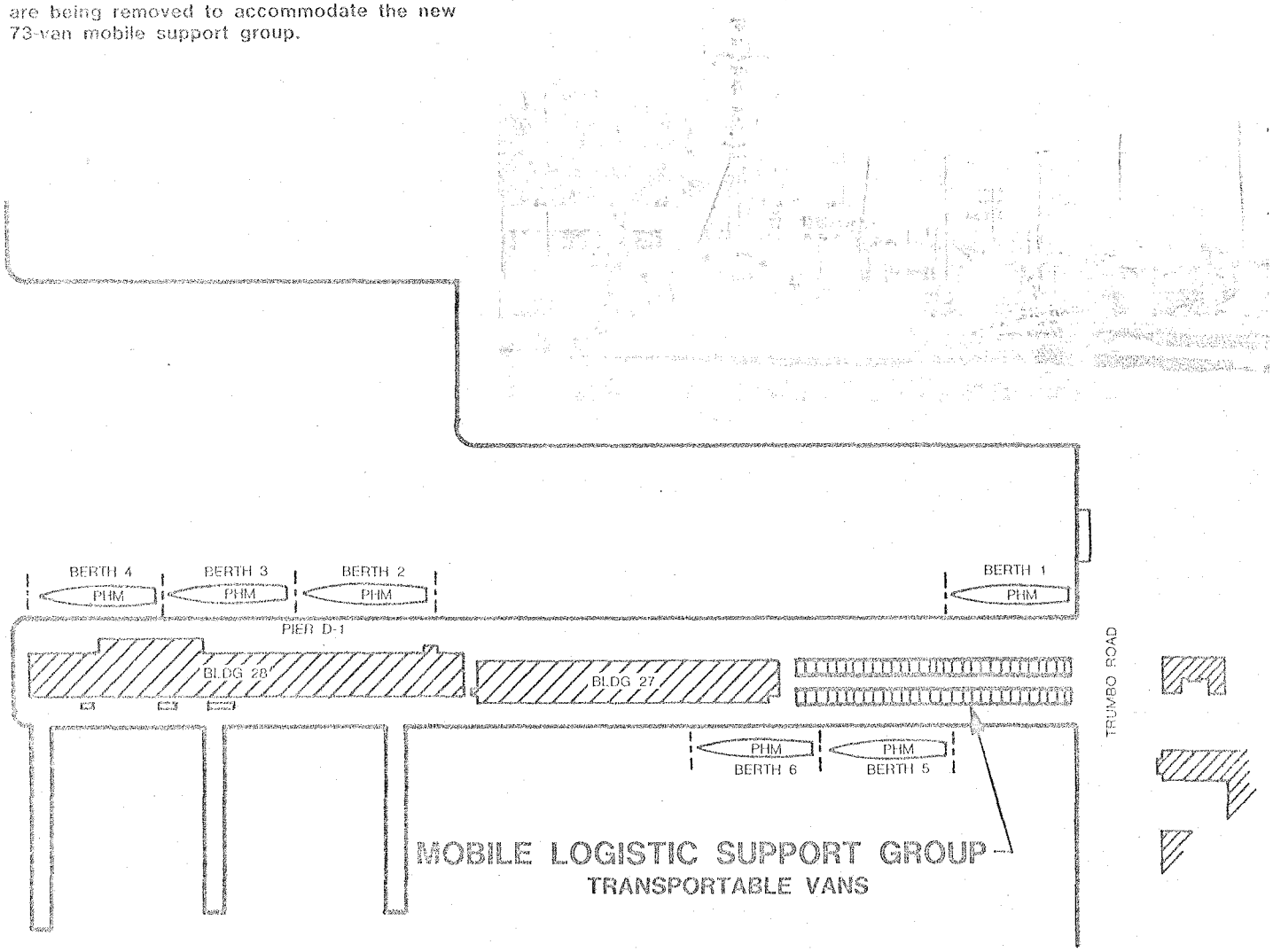
Admiral, I'd like to return to this mobile logistics, the first half of your response—how is PHM mobile logistics actually going to be handled? You mentioned deployable vans. How, in general, is that system going to work? When you say deployable, in what sense of the word do you mean that?



Logistic support really has to be considered in two parts. When the ships are in Key West and have base configuration, logistic support will be provided by their mobile logistic support vans right on the pier. When we order the ships to deploy, however, we have to look at getting the two components of the system to the deployed area. The first element is, of course, the PHM's themselves. There are basically three ways you can get the ships over there: they can sail in company, with fueling stops along the way; they can be towed because they lend themselves very easily to towing at a fairly high speed; or they can be carried on board a variety of lift ships, either commercial or Navy.

The second part of the deployment and logistic sup-

▶ *Pegasus* is moored at Pier Delta 1, Trumbo Point Annex. Ramshackle buildings on the pier are being removed to accommodate the new 73-van mobile support group.



port is to get the 130 people and the 73 vans of the mobile logistic support group to the deployment operating area. And that will probably involve a lift—perhaps commercial container ships which are very adaptable for this kind of lift—to an area where they can be easily offloaded. The vans can then be road transported to the actual operating site if that's necessary.

Once at the site, there is need for some additional logistic support such as berthing because currently the 73 vans do not incorporate berthing accommodations. The key, of course, is to reduce the PHM's maintenance dependency on anything but the deployable mobile logistics capability. I would hope that as we get all of the vans together within the next several years, we will try increasingly during deployments to make the PHM squadron self-sufficient. Of course, the ships will need to be replenished with beans, bullets and fuel as necessary.

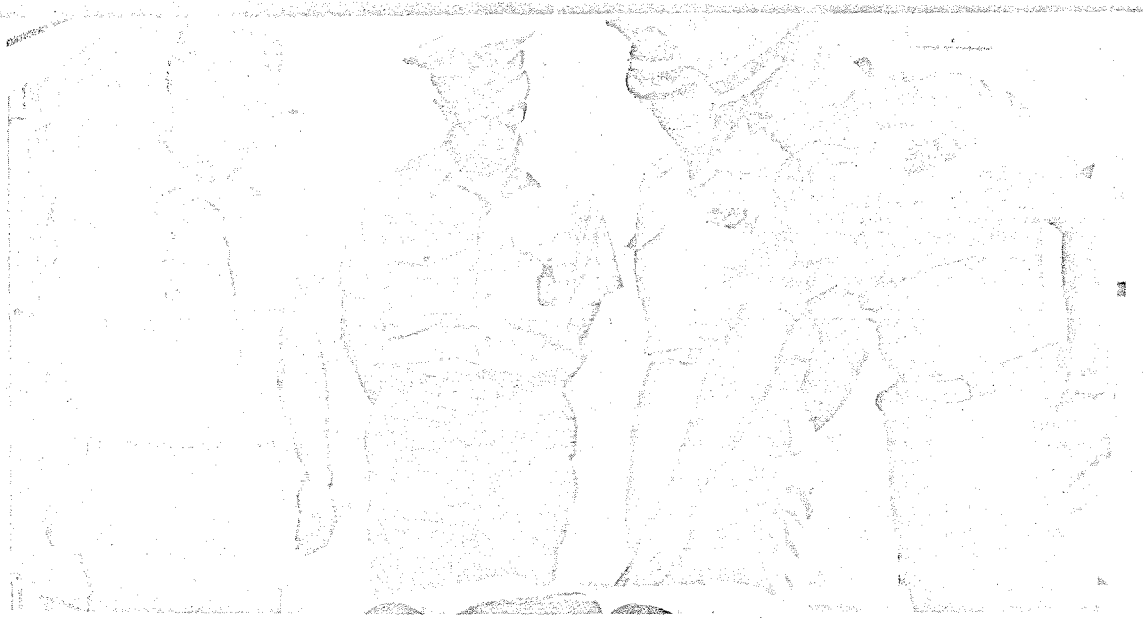
I take it from that, Admiral, that you see some exercises perhaps somewhere in '83 where this entire entity would be partially or substantially exercised.

There is no question but that we have to exercise the PHM's in a deployed mode. The most logical place for the initial deployment would be the Mediterranean. If you look at the Mediterranean geography—and lay out the radii of capability of the PHM—you will find that we can cover the Mediterranean quite adequately from about two or three selected bases. We would want to have a fairly long initial deployment to prove the sustainability of the PHM, probably using the first two PHM's.

I'm assuming, Admiral, that there has been some activity to locate the commercial container ships, or whatever we would use at the time, perhaps with RADM (Bruce) Keener's Military Sealift Command?

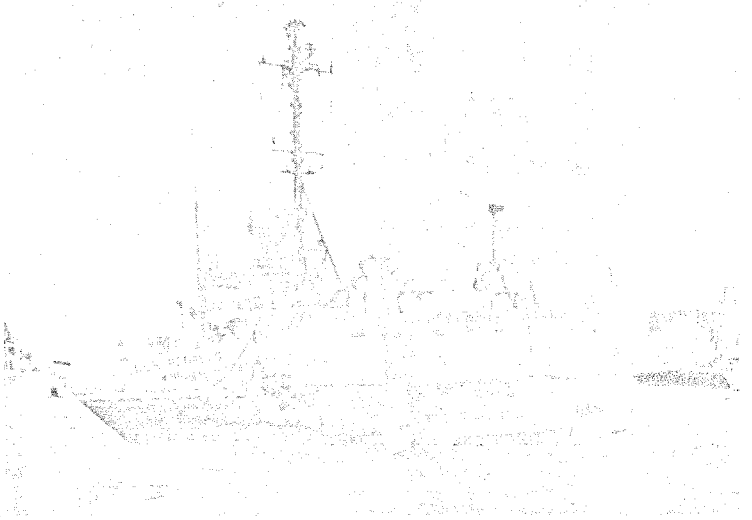
We haven't made specific overtures but the lift is readily available and we know that it is absolutely feasible and can be done on very short notice because we've had experience with van lifts on short notice.

This may be a bit premature, Admiral, but what kind of overhaul cycle do we see for the PHM's and where might that be accomplished? Is there a special capability needed in a shipyard to handle the waterjet propulsion



▲ IC1 Alan P. Hayes, PHMRON TWO MLSG; GSCS John R. Kirby, C S/C, PHMRON TWO MLSG; CDR L.M. "Mike" Hardt, COMPHMRON TWO; and LCDR Christopher H. Rossbach, OIC PHMRON TWO MLSG discuss plans for mobile facility installation on Pier 1. Behind them are the new 20-foot vans.

▼ The causeway is required for mooring PHM's to keep foils clear of the pier. Two Harpoon missile mounts are located on the stern of the ship.



system and the foils and those other things that are unique to *Pegasus*?

There is no question about that. As you might expect, there will be a significant learning curve in any overhaul yard to which these ships go. We would hope to have a specific overhaul yard develop the needed capability and then be able to have multi-ship, multi-year overhaul contracts with such a yard. The current view, always subject to change as we gather more experience, envisions a 10-week overhaul every two years. Between overhauls we will need to reduce the bow wave of work that sometimes builds up for an overhaul and tends to extend it.

Is there a dominant feature of the PHM that would drive or shape that interval of time? The foils, for example, which I understand must be replaced after a certain number of hours?

No, we don't see any part as particularly critical. We have had experience with all of the systems already. For example, the engines are ones that we feel very comfortable with and the new type of foil should not be a critical path item.

With your permission I would like to turn to some considerations of an operational kind, Admiral.

Commence firing.

What military capabilities make the PHM such an attractive surface platform to naval tacticians?

The PHM has some extremely useful features that lend themselves to a variety of tactical applications. The first, obviously, is its speed. It's very fast. Over 40 knots is a very satisfying speed for almost any kind of tactic.

The second thing is its substantial sea-keeping capability. Unlike the PT boat and the earlier PG's, it can get out in a very heavy sea and maintain almost peak speed when it's on the foil. This is a tremendous asset because it is essentially not sea limited within any practical sense of the word.

The third attractive feature is its agility. The survivability of this small ship is going to depend in large part on its speed and on its agility. It's going to be very difficult for aircraft to kill this small ship because it is so maneuverable. We have proved this repeatedly in paper exercises and, more importantly, in fleet exercises.

The fourth characteristic, which is the big one, is that it carries the clout of a major combatant in the Harpoon. Although the Harpoons are limited in number, the PHM can carry out a mission kill against a major combatant. And, of course, it has the 76mm Oto Melara which is a very accurate gun and part of a good defense/offensive system.

The final attraction is that PHM's are relatively inexpensive and you can build several PHM's for the cost of a large combatant. All these are strong pluses as a naval

strategic planner or tactician looks at these ships.

However, PHM's have obvious limitations as well. No matter how many you build, PHM's are no substitute for such highly capable ships as the CG 47 or DDGX.

I have heard that the Israeli Navy has had some positive experiences with hand held weapons; something like the Army Red-eye. Is any consideration being given toward including them as part of the armament allowance of PHM's?

The PHM's of the future are undoubtedly going to progress, as all ships do, in their mission area, including self defense. I would hope that we look at any and all weapon systems—either hand held, or mounted, but lightweight—and that we equip PHM's to strengthen their survivability. We would like to see, of course, an increase in the electronic warfare, black box capabilities of the PHM. We are hoping that that will come along as we learn.

Returning to this issue of upgrading weapons systems to match those that are entering the Navy, Admiral, would Tomahawk be a likely successor to Harpoon?

I'm not sure you would be able to put Tomahawk on that small a platform but we would want to look at any weapon system coming along for adaptability to PHM's. One of the problems you always have on a small ship like the PHM is that you are weight limited. If you put very much on you've got to take something off. But I would certainly hope that we do some very careful studies on improving the clout per ship since that is its major asset.

Admiral, we have seen *Pegasus* in a few fleet operations in the Pacific and one, at least, in the Atlantic. Apparently this one PHM has done rather well. Is work going forward to develop multi-PHM tactics that can be used when *Taurus* and the other PHM's have finished shakedown? And who is doing that—the Surface Warfare Development Group here? Are we looking, for example at two ship SAG's (surface action groups)? Perhaps you can give our readers some hypothetical concepts of how PHM's might be tactically employed in SAG's together with large combatants?

We're still in the infancy of PHM tactics, as you can appreciate. Some of the tactical development is being carried forward by a combination of *Pegasus*'s commanding officer, the squadron commander and the group commander in Mayport, RADM (Thomas R.) Kinnebrew. But the main focus is in the hands of the Surface Warfare Development Group. That's CAPT (Oscar Clarke) Chisum's outfit and they are doing some very excellent work.

We're really looking at two areas. We're convinced that the PHM, in certain geographical areas, can be used as an integral part of the battle group. This is the way that SECOND Fleet has used it, and used it very successfully. There the primary use is to multiply your kill capability. The PHM is, in effect, a remote Harpoon launcher that is very difficult to find. At a relatively low cost you get additional forces that can provide the same kind of surface kill as a larger combatant. So, certain tactics are going to be pointed towards refining the use of the PHM as an integral part of a battle group.

The second and very important tactical area is choke point control. We have done a number of command post exercises and some tactical development work in that area, and it shows great promise.

That would not necessarily be part of the battle group, that would be PHM's together or with aircraft, or whatever?

Yes. We are looking at tactics in which we would use several PHM's in combination, probably with aircraft and particularly with surveillance aircraft as a member of a choke point control force that could be positioned, for example, in the Florida Straits. There is also a wide variety of applications in the area of SLOC (Supply Lines of Communication) support both in screening and in augmenting convoys—in providing screening in the vicinity of departure ports, and in the kind of SLOC support you would have to provide particularly in the early phases of reinforcement of Europe. This is especially important where you have large numbers of friendly ships milling around with very little protection.

In most of these applications we would want to have pairing of PHM's. We have found from past experience, going back as far as WWII PT boats, that it is not a very effective or prudent move with this type of ship to put it out by itself.

There are some other possibilities that suggest them-

◁ *Discussing unique handling characteristics of PHM's are* LCDR W.S. "Scott" Slocum, PCO *Taurus*; LT Alan D. Zimm, XO *Pegasus*; LCDR Roger L. Bushman, PXO *Taurus*; and CDR James W. Orvis, CO *Pegasus*. They are on the bridge of *Pegasus*.

◁◁ *Pegasus* CPO's discussing ship's business in the wardroom are (left to right) QMC Michael G. Savoy, GSMC Thomas S. Davies, OSC Theodore C. Bradt and GSMC Wayne C. Walker.

selves that were never originally envisioned in the PHM mission statement. One is in the area of mine countermeasures. We think there is a possibility that the PHM can be fairly easily adapted to certain helicopter mine sweeping rigs. We're going to be trying that in the next few months. There is also some very preliminary work being done on hydrofoil use as an antisubmarine warfare platform. But this is purely on paper and very much of a theoretical thing.

Admiral, turning from tactics but returning to the strategic geographic areas where the PHM might be used effectively, can you suggest areas other than the Med?

Careful examination of a map reveals areas other than the Mediterranean where, quite obviously, the geography lends itself to the PHM very well. The Caribbean obviously suits the PHM's capabilities. If we look at the Middle East we can find a number of areas where we can position the support group and use the PHM's to good advantage.

If you look at Northern Europe. There are a number of sites on the Norwegian coast from which NATO reinforcement amphibious operations can be supported. Or you can turn to the Baltic, or the English Channel area. Other areas suggest themselves in the Pacific.

Keep in mind that PHM's are specifically conceived and constructed to operate within their radius of action and out of a base. Geography is therefore a key factor. It would not, for example, make much sense to have PHM's out in the middle of the Atlantic.

Admiral, do you a have a closing thought for the readers of *Surface Warfare* on PHM's.

Yes, I do. There has been much discussion of the PHM, but from where I sit as COMNAVSURFLANT it boils down to this. The advantages of the PHM are a terrific punch for a very small ship, a difficult ship to kill, a high speed ship, a ship that can be deployed and repositioned very quickly and fully maintained from its vans. Those are strong advantages and I believe naval planners and tacticians will increasingly value them when we prove the concept and deploy PHM's to the right places. We are going to do all we can to help those ships and their proud officers and men to become strong contributors to Atlantic Fleet's Naval capabilities. We enthusiastically welcome the PHM crews and their families to the SURFLANT surface community.

Thank you, Admiral Johnson.

It was a pleasure.

The PHM sailors say to bring your fishing rods, walking shoes, snorkeling and scuba gear—and leave the woolen muffler and snow shovel in storage. Key West duty may be at the end of the USA, southern end that is, but for many it is a place to begin an outdoor life-style that spells family fun for marrieds and the enjoyment of new outdoor sports for singles. Year 'round tropical breezes and sparkling clear water keep the temperature of this 3 × 5-mile island, part of the last living coral reef in North America, inviting to outdoor living all year round. Six hundred varieties of edible fish are said to inhabit the surrounding waters. Rains do come, some 40 inches a year, mostly during the hurricane season from about June 1 to November 30.

Key West's attractions have lured Presidents—Harry S. Truman visited 16 times to sample its pleasures—and the island enjoys a sizeable tourist trade. Novelist Ernest Hemingway (*For Whom the Bell Tolls*) lived in Key West for many years and playwright Tennessee Williams (*Cat On A Hot Tin Roof*) is a current resident. Excellent restaurants abound, often with outdoor patios and with menus to fit every taste and pocketbook and there is historic sightseeing and arts and crafts aplenty.

The U.S. Naval Air Station, Key West, looks after the needs of all Navy personnel in the area and is anxious to make PHM sailors feel welcome. Family and bachelor housing is in various locations on the island; a commissary and a medical clinic are available with a quick air evac from a nearby Navy airfield if needed. Special services from nursery to movie theatre are maintained.

Commodore David Porter called Key West "the Gibraltar of the Gulf" more than a century ago. All in all, surface warfare sailors in their fast, giant-killer ships seem glad to be back.