

# Employment of Amphibious MEUs in National Responses to Situations

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## Summary

The Naval Forces Division of Office of Program Analysis and Evaluation (PAE) in the office of the Secretary of Defense, asked CNA to update CNA's response database and to perform historical analysis of responses to situations to date by what are now usually called Expeditionary Strike Groups (ESGs). Across the years, ESGs, their previous incarnations as ARG/MEUs, and even individual amphibious ships have responded to situations around the globe—in their typical formations, as separate ships, or in joint and combined operations.

OSD/PA&E asked CNA how data from historical experience might illuminate the conditions of future responses and whether such data could help U.S. decision-makers anticipate where the response operations might take place, how much warning time might be available, what speed of response might be necessary, and, for given or joint operations, what amphibious forces might be sent to situations by the President and Secretary of Defense. The data from historical experience might help the Defense Department to determine what numbers and kinds of ships might be useful in the future.

CNA has compiled database entries on U.S. forces' responses to situations through the year 2006 (Annex A), having updated its previous data base (spreadsheet), which had gone through the year 2000. The new entries include the activities of ships in association with Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF).

The original CNA studies did not include data on the actual functions that U.S. forces carried out in response situations. (Another study, *The American Way of War*, addressed the nine actual combat situations in which the United States was engaged between 1989 and 2003.) There has been a need to assess those functions, at least for 1990 on. There is also a question of warning times: When was the situation noticed on the world scene, and then when did the adminis-

tration issue a warning order for forces to get ready to deploy to the situation?

A final issue is whether the ships deployed to a situation were appropriate to that situation and, if not, what ships might have been appropriate. That is, in specific situations, were the ships' capabilities either excessive (not used) or insufficient? Was their speed of transit a factor in the timeliness of their response?

For the study, we charted the times of responses (that is, days from where the ARG/MEUs/ESGs were when ordered to respond to where they were ordered to go) and how many miles they traversed. We found that most of the MEUs got "there" in 0-12 days, with most from 0-6 (39 cases). There were some outliers, from 18-37 days (8 cases; with 6 in the 23-26 days range), but these mostly involved a rotation of one MEU in to relieve another already there.

The mileage was much more varied, from 220 to 7800 nautical miles (except in those cases in which they were "0," i.e., already there). For the two biggest operations—Desert Shield and OIF—the bulk of Marine forces were moved in by the MPS-fly-the-personnel-in combination, though the ARG/MEUs were also involved in delivering units. OIF (and Desert Storm itself) were, of course, large joint build-ups where the speed of arrival of any given element of the force was irrelevant (the U.S. does not commit forces piecemeal).

Just about all of the responses except for the Iraq cases were made by the already deployed ARG/MEUs—that accounts for the short times for their transit to the scenes. Or they were in transit from one area to another and stopped by on the way (Sea Angel into Bangladesh and the tsunami, for instance, and, as far as we can see, for the East Timor cases—where the U.S. was in a supporting role to the Australians).

Only in 17 of 66 cases did we see a whole BLT go ashore. Another 23 cases involved perhaps a company, whereas 26 involved only small teams ashore (e.g., a Forward Command Element (FCE)). Except for the Iraq operations, it was always only one ARG/MEU, until rotation—new situations around the globe to which the U.S. responds

seem to happen only one at a time unless they are Iraq (and Afghanistan as well).

The benefits of having a couple of MEUs on deployment seem evident. Second, most useful capability to having MEUs deployed is all those helicopters—the ship-to-shore work horses. A third benefit is the floating hotels offshore that amphibious ships provide, for the rotation of people on shore, especially in an inhospitable environment, whether because of natural disasters or continuing conflict.

An initial view of how HSVs might have featured in these responses if they had been available is that the speeds of response that we have seen were adequate for existing amphibious ships. The speed of HSVs to cover long distances does not seem necessary. The HSVs have to go to piers or seawalls to offload, whereas most amphibious ships have both air and surface off-loading capabilities from offshore. The amphibious ships can also loiter offshore. We found a number of cases where the ARG/MEUs responded to the area, but were then held offshore for days (and even weeks) before decisions were made to send some of their assets (people, helicopters) ashore. In many cases, the helicopters were the work-horses of the operation, and while HSVs can transport them, they can't operate them on any kind of sustained basis. Finally, we noted that in a number of situations, including the tsunami relief operation in Banda Aceh, Indonesia, Marine personnel were rotated to and from the shore, including for their overnight stays, at the request of the Indonesian government. Amphibious ships can operate as offshore hotels in way that HSVs cannot. Nonetheless, HSVs first came to U.S. notice because they were the way Australian troops got to East Timor for their peacekeeping operations.

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# Approach

We have updated the database of U.S. forces' responses to situations into 2006, having paid particular attention to ESGs or their equivalents. Then we examined the timelines involved in the deployments of ESGs or their equivalents to situations, particularly from 1990 on, including warning times. Finally, we examined the functions of the ships at the scene, including what forces or other elements they sent ashore and how, how long they were there, what relief supplies they may have delivered, and how many people they may have evacuated in a Noncombatant Evacuation Operation (NEO), depending on what their missions in the situations were.

We limited our review of the historical experience of responses to the period 1990-2006, to include Operation Enduring Freedom in Afghanistan and Operation Iraqi Freedom—both of which are ongoing. Iraq dominates ESG or their equivalents' responses, with 18 cases, beginning with Desert Shield/Desert Storm on one end and Operation Iraqi Freedom (OIF) on the other—though for the big operations, it was MPS that delivered most of the Marines' equipment.

Most of the other situations that U.S. has responded to in the period 1990-2006—Liberia (4 cases), Bosnia/Kosovo/Albania, East Timor (9 cases, i.e., dropping by while passing through), Somalia (8 cases, especially through rotations of MEUs to support continuing US and UN operations in that country)—were situations that had been brewing and in turmoil for years before the USG got involved. In the case of Afghanistan, the first MEU in, to Camp Rhino, arrived on 26 November 2001, whereas the U.S. bombing campaign had begun on 7 October 2001.

For some NEOs (especially Eastern Exit from Somalia in 1991) and for natural disasters, the times of response would presumably have to be faster. However, the U.S. was the last country to get evacuation

capabilities to Beirut in July 2006—but that demonstrates that these responses are all dependent on Washington policy decisions almost more than the exigencies of the situations, especially if their strategic significance were subject to debate with the U.S. Administration.

The original CNA studies did not include data on the actual functions that U.S. forces carried out in response situations.<sup>1</sup> (Another study, *The American Way of War*, addressed the nine actual combat situations in which the United States was engaged between 1989 and 2003.<sup>2</sup>) There has been a need to assess those functions, at least for 1990 on. There is also the continuing question of warning times: When was the situation noticed on the world scene, when did the U.S. Administration issue a warning order for forces to get ready to deploy to the situation, and when did they order the operation executed (EXORD)? Of main interest for this study was their speed of response upon receiving the EXORD: how long did they take to get there, and how far did they have to travel (obviously linked variables).

Once the amphibious ships arrived at the scene of the response, we examined when they moved their personnel and other capabilities ashore, how they moved them, whether combat units were sent ashore, whether they delivered relief supplies, who they may have evacuated if on a NEO (Noncombatant Evacuation Operation), and when they withdrew.

We have also provided some summary observations, including some relating to the current interest in the utility of High Speed Vessels (HSVs). Our research in its detail has been on the historical experience of the use of ESGs or their amphibious equivalents, rather than an explicit analysis of the utility of HSVs—for which we were not

- 
1. W. Eugene Cobble, H. H. Gaffney, and Dmitry Gorenburg, *For the Record: All U.S. Forces' Responses to Situations, 1970-2000 (with additions covering 2000-2003)*, (CNA Information Memorandum D0008414.A2/Final, August 2003).
  2. H. H. Gaffney (Project Director), W. Eugene Cobble, Dmitry Gorenburg, and Michael McDevitt, *The American Way of War and its Transformation in the Post-Cold War Period, 1989-2003* (CNA Research Memorandum CRM D0008607.A1/Final, February 2004).

tasked. We understood that PA&E was interested in part for their own work in judging what might be an appropriate balance between future acquisitions of High-Speed Vessels (HSV) versus acquiring conventional amphibious ships. As noted above, we were not tasked explicitly to analyze the value of HSVs in support of some force structure decisions. We were asked simply to do an analysis of historical experience. They welcomed any observations we might have on HSVs, but it was not an analysis they requested. If they had so requested, then we might have undertaken an entirely different approach to the analysis of the historical experience, or based it on other than historical experience.

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## Database update

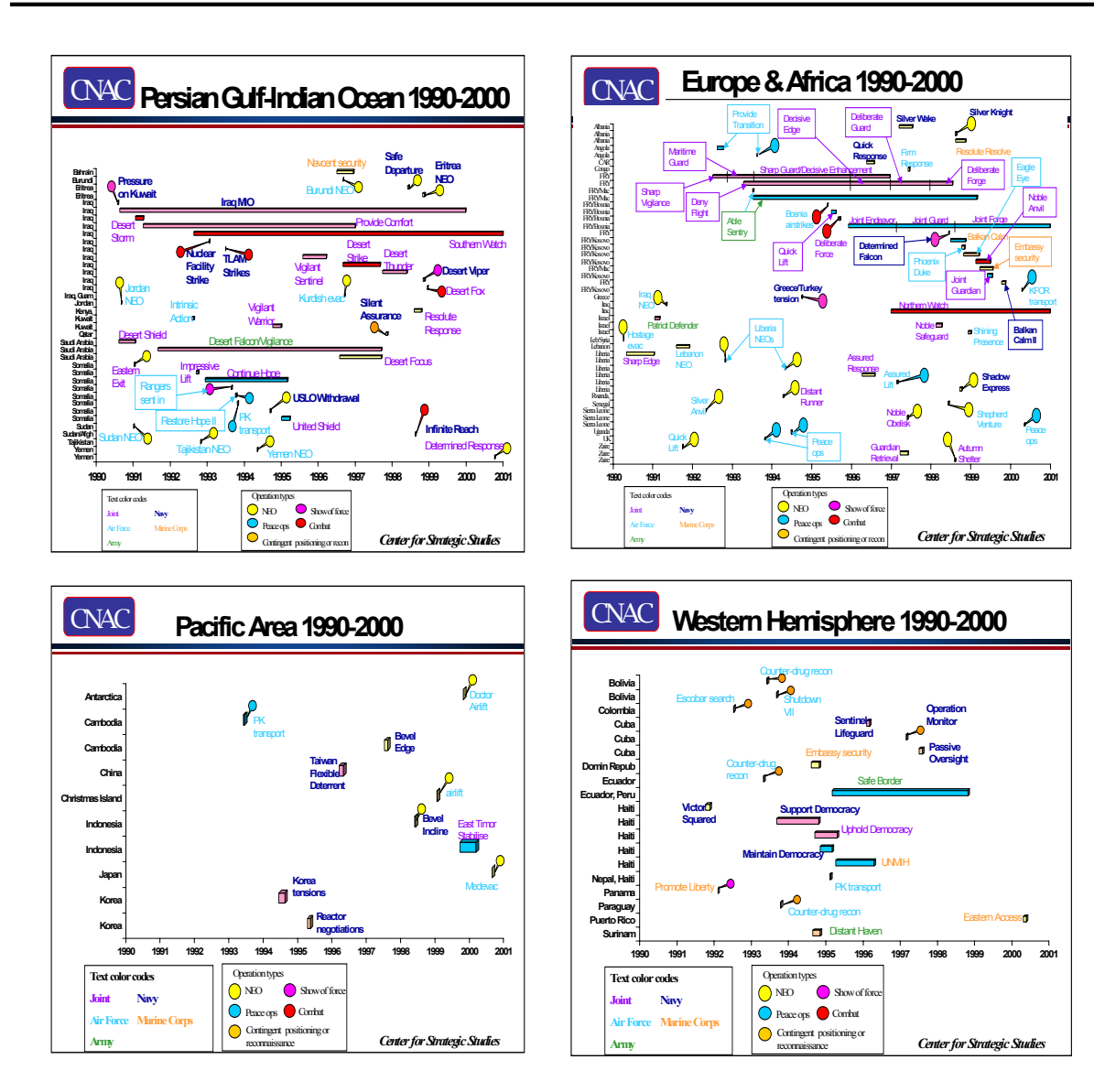
Previously, CNA had assembled a complete data base of U.S. forces' responses to situations (i.e., as ordered by the President/Secdef), from 1970 to 2000.<sup>3</sup> For the purposes of this study, we have focused on the period 1990-2006. We have now extended that data base through 2006 (See the spreadsheet at Annex A). The original data base had listed the numbers of units involved, so that we had identified the participation of amphibious ships, at least through 2000. Then using the Slider tool, we were able to track all the deployments of amphibious ships and then to correlate them with the dates of responses to situations (just about all which happened on scheduled deployments).<sup>4</sup> As a related data search, one of the authors (Benbow) researched all the MEU (Marine Expeditionary Unit) histories as filed at the Marine Corps Historical Center in Quantico, Virginia.

The data base for the period 2001-2006 has 27 lines of individual responses, whereas the data base has 273 lines for the years 1990-2000. The general conclusion is that the occasions for responses have dropped drastically in the new century, reflecting the general decline of conflict around the world. At the same time, a huge number of the responses in the 1990s were humanitarian relief deliveries, mostly by the U.S. Air Force; even these have dropped off considerably in 2000-2006, to 14 of the 36 lines in the period. (We use the term "lines," rather than responses, since many situations involve the return to previous situations, or the changed name of a continuing operation, or rotations of units to a continuing operation.)

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3. The spreadsheet is in an annex to W. Eugene Cobble, H. H. Gaffney, and Dmitry Gorenburg, *For the Record: All U.S. Forces' Responses to Situations, 1970-2000 (with additions covering 2000-2003)*, (CNA Information Memorandum D0008414.A2/Final, August 2003).
  4. G.A. Landry, *USN Amphibious Ship Employment History Database (U)*, (CNA document CIS D0014770.A1/SR1, September 2006).

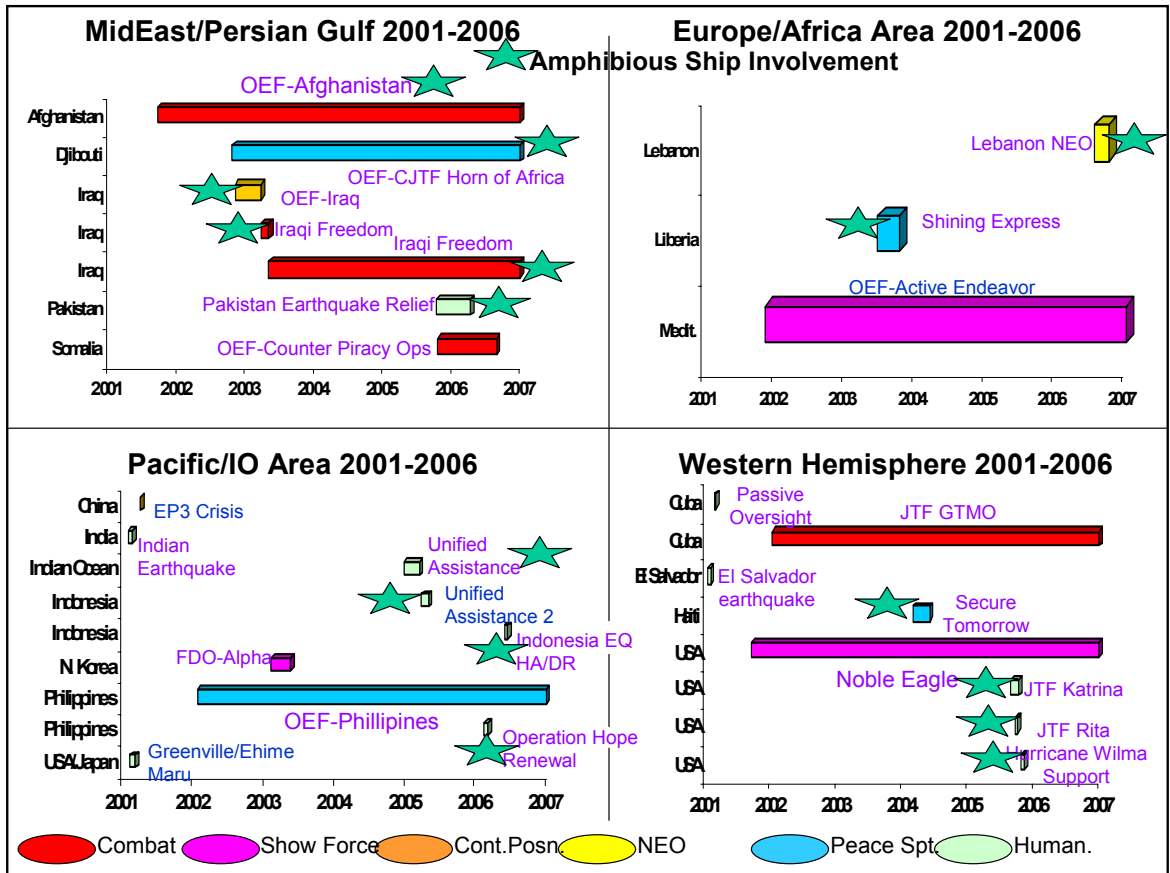
The operations carried out by all U.S. services in the period 1990-2000 can be shown in this chart combining the four regions:

Figure 1. U.S. Forces' Responses to Situations, 1990-2000



The operations carried out by naval forces in 2001-2006, i.e., the updates to the database, are shown in the following chart. Note that they are much fewer.

Figure 2. U.S. Forces' Responses to Situations, 2001-2006



Marine Corps personnel were involved in almost all these operations, though not always when debarked from amphibious ships. Note that the long, drawn-out operations in the period 2001-2006 include Operations Enduring Freedom in Afghanistan (OEF), Iraqi Freedom in Iraq (OIF), and anti-terrorist training support to the Filipinos in the south (we have labeled this “peace support” because The Philippines did not want U.S. personnel involved in combat against the terrorists, though U.S. military personnel did become accidentally involved during one incident at sea). In addition to OEF and OIF, we have called the counter-piracy operations off Somalia as “combat” simply because U.S. ships were fired at during one pursuit of pirates. We have included U.S. domestic operations on the Western Hemisphere charts, though we have not included them in past studies (the USS Iwo Jima was particularly useful as a command ship and for its

accommodations in New Orleans). The chart also includes the essentially routine, long-term operations of Operation Active Endeavor in the Mediterranean Sea, CJTF HOA in Djibouti, and the now routine air patrols in the U.S., that is, Noble Eagle, but these have not involved amphibious ships.

Otherwise, the responses to situations shown are very scattered and very short. It would appear at this juncture in U.S. military history that responses to situations are much fewer—overwhelmed as it were by Iraq and Afghanistan. But it is not clear that the U.S. passed up other opportunities to intervene because of lack of resources.

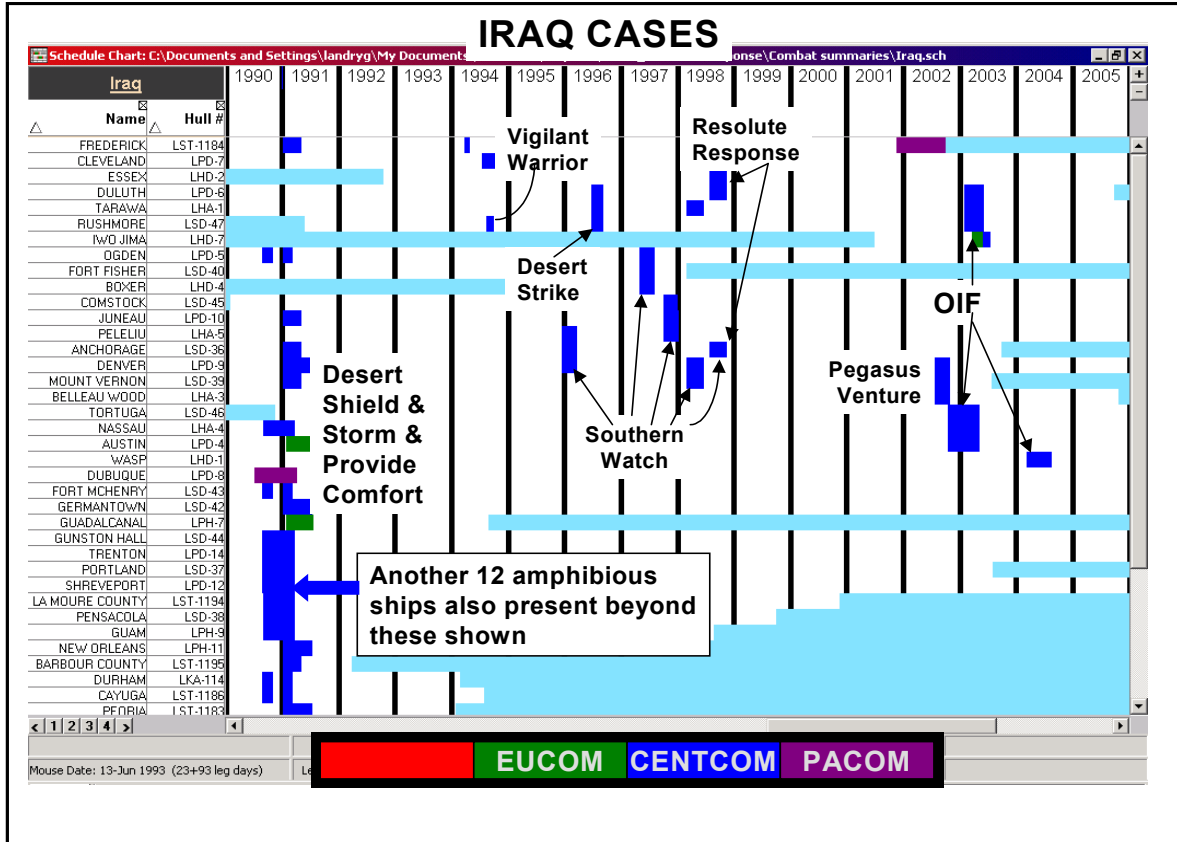
## **Graphic summaries of ARG/MEU responses to situation**

The following charts show, for those situations that were continuing or repetitive, the engagement of the ARG/MEUs (this data representing the ships of the ARG). One that is quite striking in the Iraq and Adriatic cases that follow is the intermittency of deployments of the ARGs, except for Desert Shield/Desert Storm/Provide Comfort (in Kurdistan). The explanation is that most of the Marines that went ashore for Desert Shield and Desert Storm were flown in to marry up with equipment brought to Saudi Arabia by MPS. The same was the case for Operation Iraqi Freedom. Some units were transported by ARGs in addition to the MPS connection. The big decks, especially (LHAs/LHDs), were used to operate AV-8Bs, both for the continuing Southern Watch no-fly zone operations and in support of the major combat phase (“mission accomplished” phase) for OIF. For the Adriatic cases, the ARG/MEUs were in reserve offshore. The MEU on hand (they were rotated) was the reserve battalion in case needed on shore (26 allied battalions ashore, 1 offshore). It also provided CSAR and rescued the downed F-16 pilot. Then, when the peace agreement was reached for Kosovo in June 1999, the MEU on hand off-loaded its personnel and equipment near Thessaloniki and proceeded across land to Kosovo as the first U.S. ground units there.

(In the charts that follow, the light blue bars indicate that the hull was not in the fleet—either retired from service or before a new ship entered service.

## Iraq Cases

Figure 3. Iraq cases

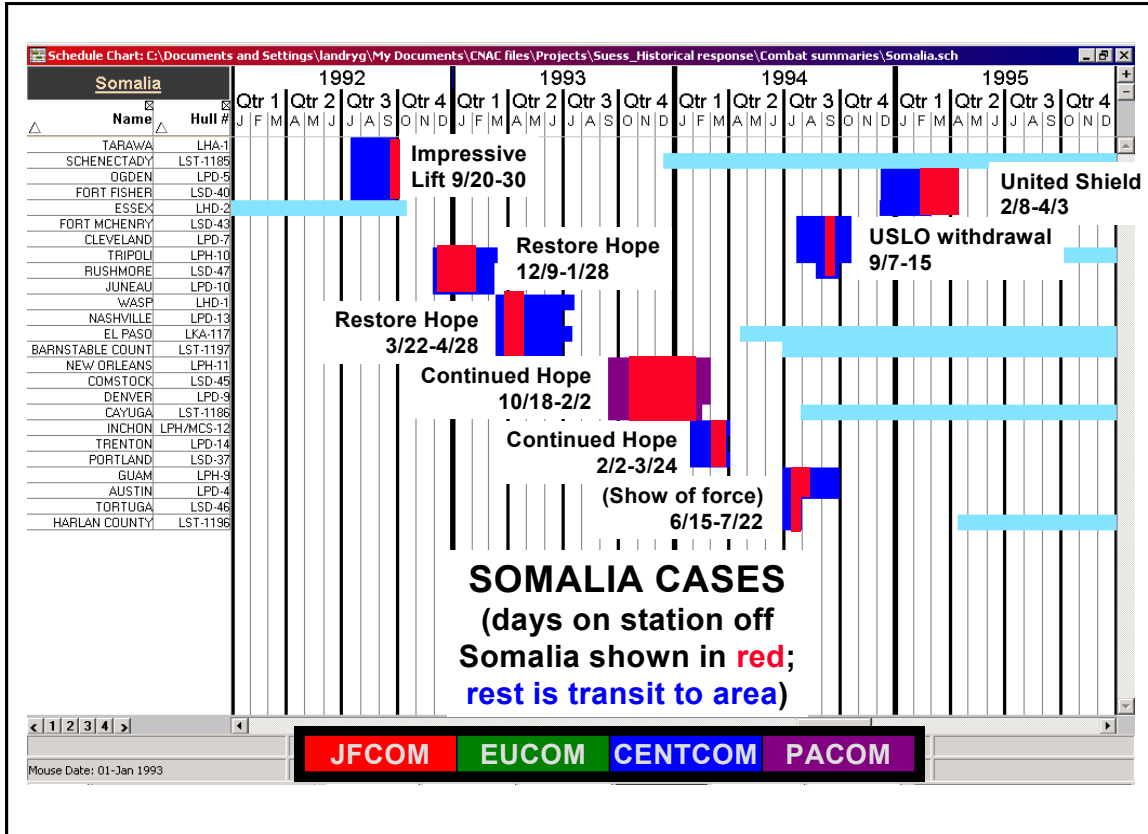


For the deployments of amphibious ships, sometimes as ARG/MEUs, for operations in response to the Iraq situations, practically the entire amphibious fleet was present for Desert Shield and Desert Storm in 1990-1991, as shown. While an ARG/MEU may have been present continuously in the Persian Gulf across the period, only their involvements in actual named operations are shown here. For instance, their participation in the 5 instances of Southern Watch was in the form of AV-8Bs carrying out patrols (Southern Watch was otherwise continuous with U.S. Air Force and U.S. Navy carrier aircraft from 1991 on).

Note the short participations of the ARG/MEUs in OIF, which also included, inter alia, AV-8B operations concentrated from one LHD. Otherwise, for OIF, the U.S. Marine Corps operations were deep inland, mostly in al Anbar province.

## Somalia Cases

Figure 4. Somalia Cases



An omission from this chart is the NEO called Operation Eastern Exit, which extended from 2 January through 11 January 1991—just before Desert Storm. In that case, the U.S. Embassy was besieged, Ambassador Bishop having clung too long to his post, and with the looting nearing the embassy compound, a true emergency arose. The helicopters of the ARG/MEU, refueled by KC-130s, flew ahead of the amphibious ships, removed the embassy personnel just as the looters and rioters were coming over the walls, and then back to the ships, which had been catching up.

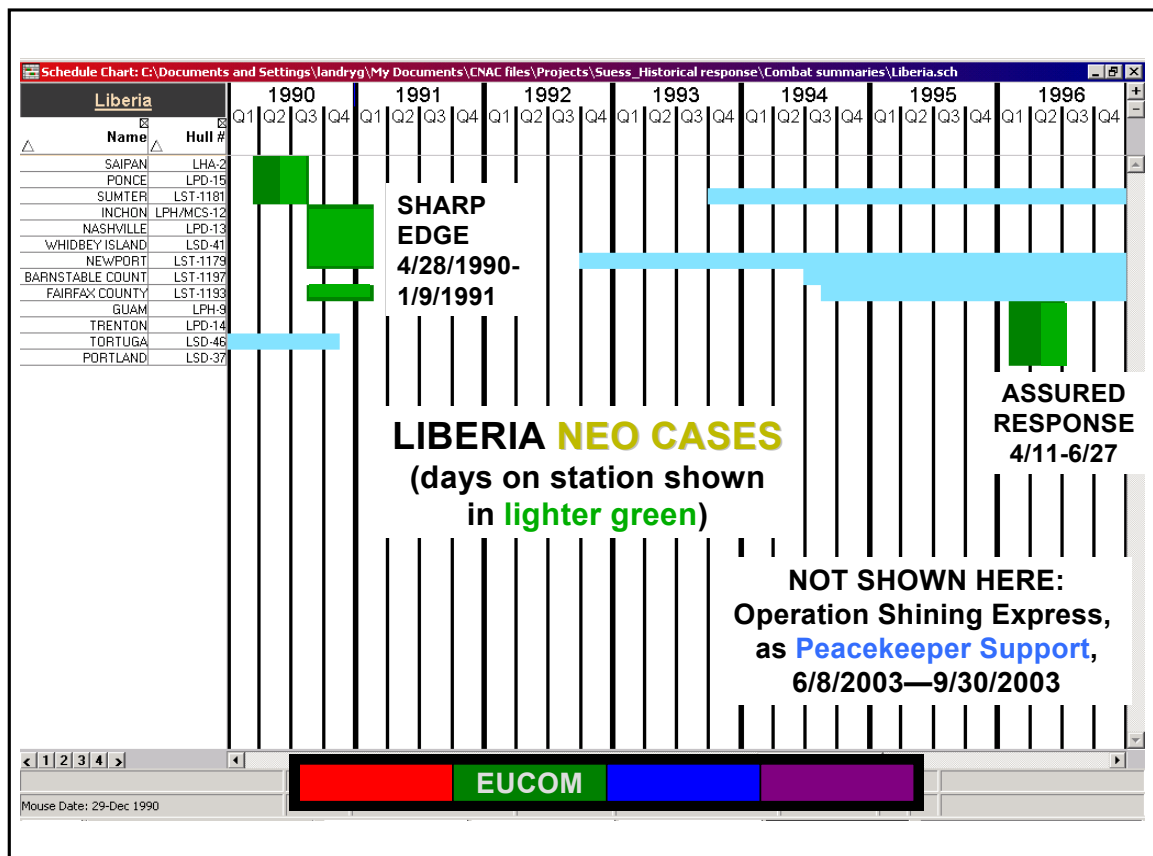
The operations off Somalia by ARG/MEUs were concentrated in the period 1992 through the first quarter of 1995. The actual times of operations involving transits into Somalia are shown by the RED boxes; the remainder of the boxes represent transit or waiting off-shore.

Note the sequence of relieving ARGs across the period shown.

Most of the U.S. Army and U.S. Marine Corps operations were from shore stations, but the presence of amphibious ships offshore provided “R&R” places for the troops.

## Liberia Cases

Figure 5. Liberia Cases



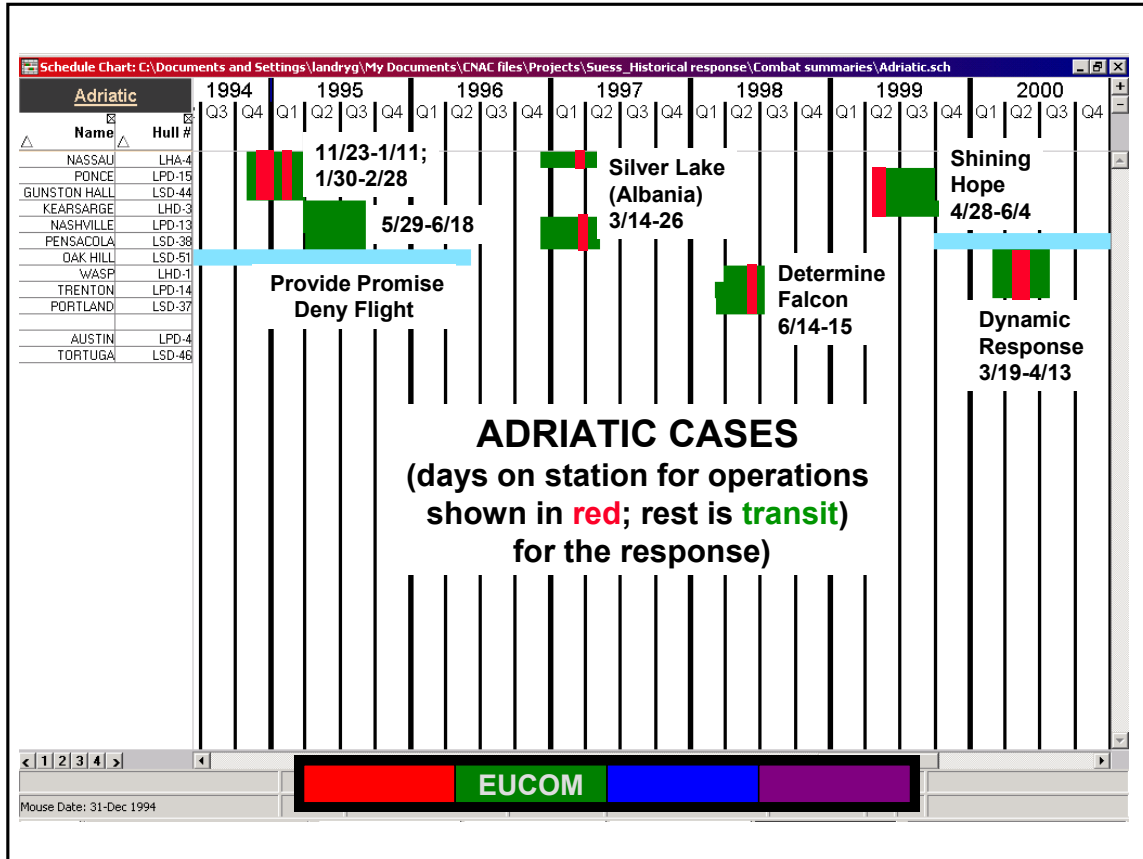
Note the prolonged time on station for Operation Sharp Edge in 1990, edging into 1991, for a total of 7 months before the NEO was executed. This might be considered the longest stretch of “contingency positioning” in our records (that is, while the U.S. Government made up its mind as to what it really wanted the military to do).

Another long response, only noted on this chart, took place across three months in 2003, during the time when Charles Taylor was finally deposed as president of Liberia. We have listed this case as

“peacekeeper support,” not a NEO. Many of the Marines present stayed on their ships offshore. Some caught malaria there, not having taken their malaria pills and not being aware that the mosquitoes could fly out to sea.

## Adriatic Cases

Figure 6. Adriatic Cases

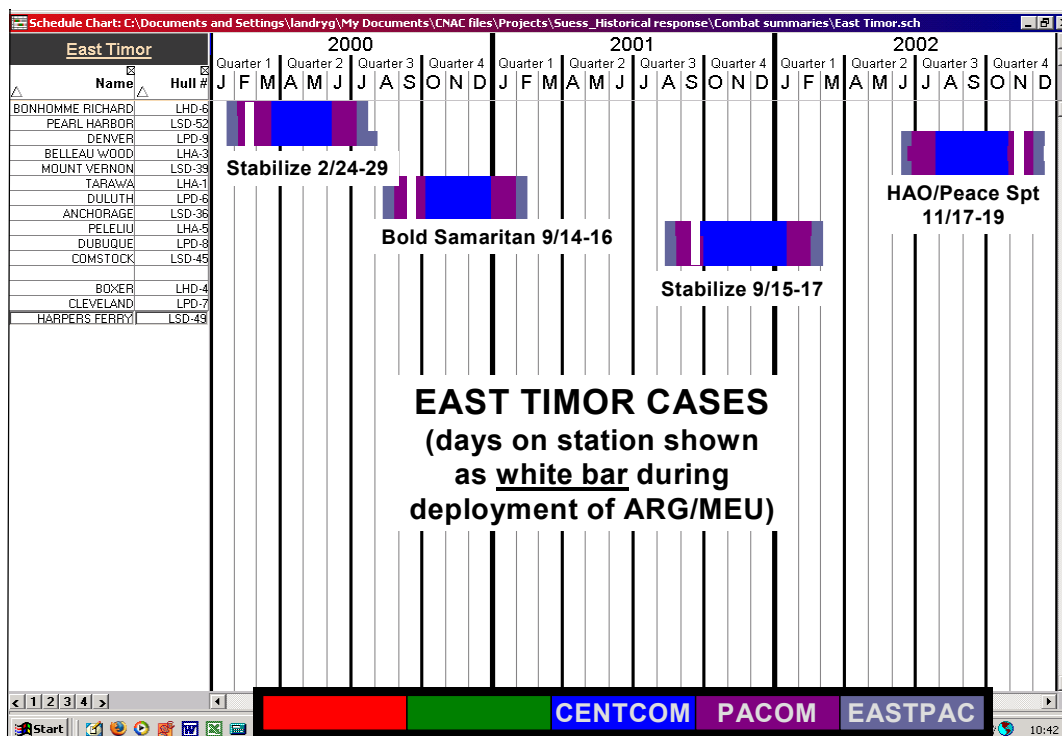


Most of the activity of U.S. and NATO forces in Bosnia and Kosovo during the 1990s was by air forces and then, when peace agreements were reached, by the stationing of ground forces, first in Bosnia as IFOR/SFOR, and then, in June 1999, KFOR in Kosovo. ARG/MEUs were in the area for much of the time, but their specific engagements are shown on the above chart. The ARG/MEUs provided CSAR (Combat Search and Rescue) throughout the period (and rescued the one F-16 pilot who was shot down) and constituted the reserve

battalion for IFOR/SFOR, but carried out specific missions only as shown here.

## East Timor Cases

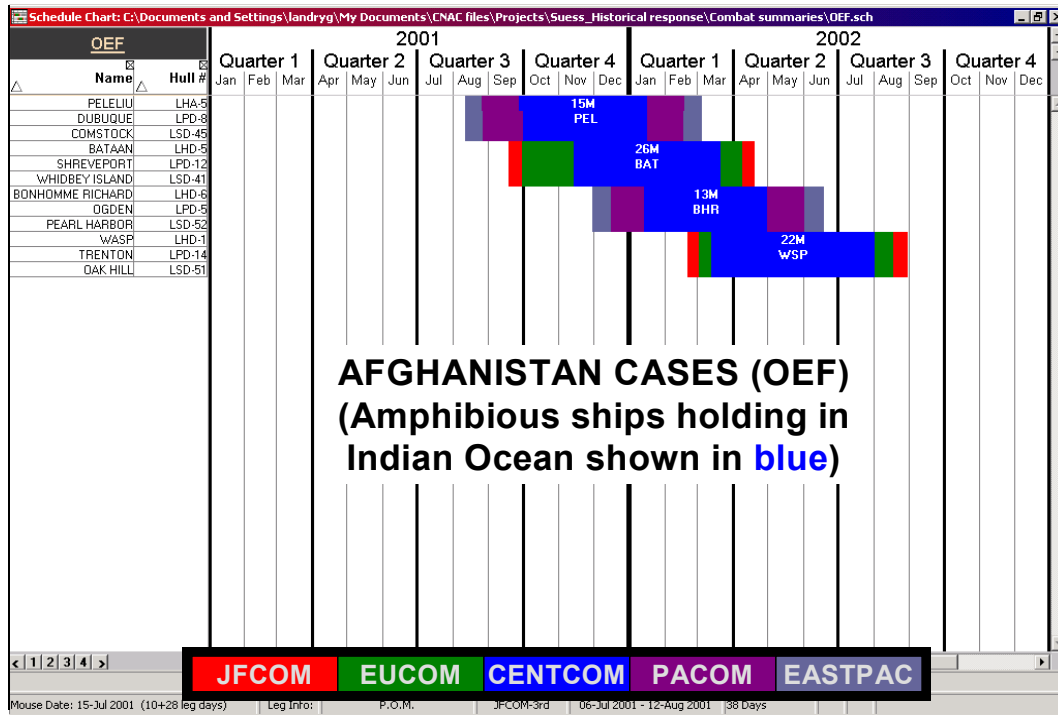
Figure 7. East Timor Cases



As this chart shows, the ARG/MEUs would stop by East Timor for 2 to 5 days on their way to their scheduled deployments in CENTCOM. The MEUs themselves did not debark onshore in East Timor; the ground force task there was carried out by the Australians. They did provide logistic support with their helicopters.

## Afghanistan Cases

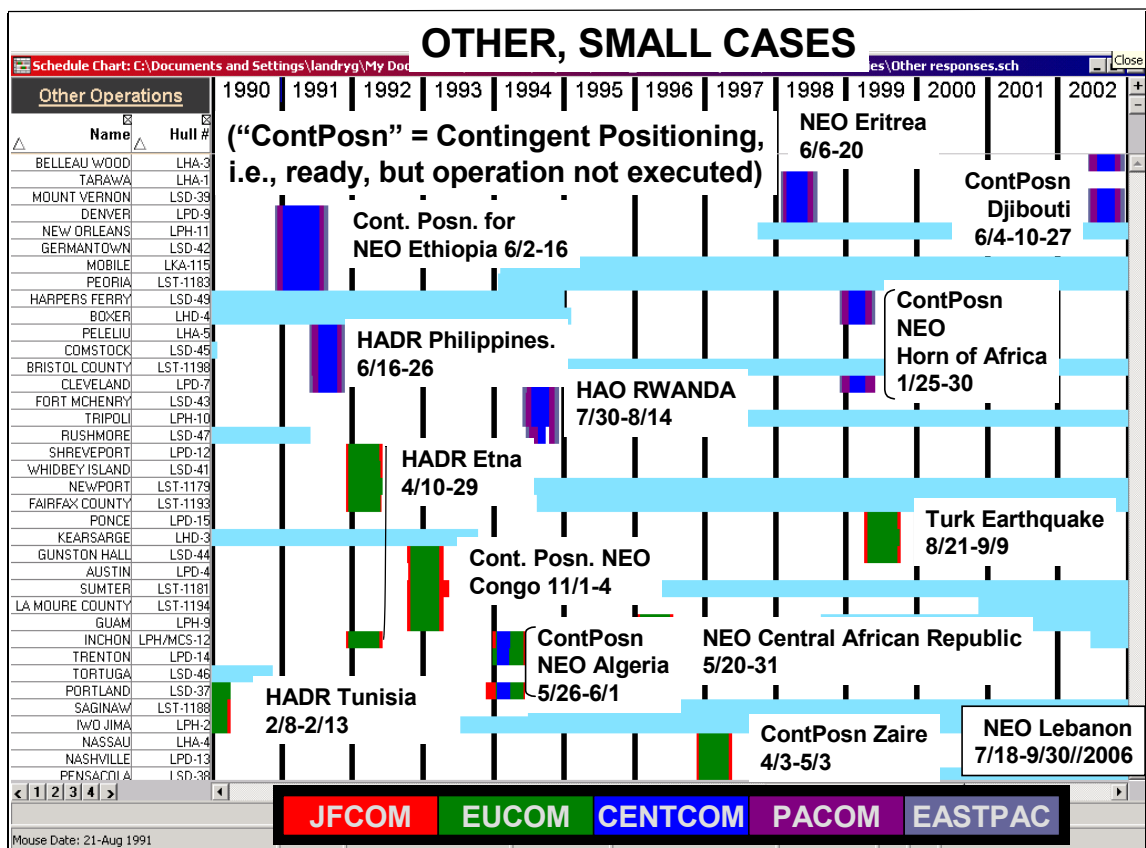
Figure 8. Afghanistan Cases



For the initial use of the U.S. Marine Corps in Afghanistan, as the first U.S. ground force troop combat units as such deployed into that country, the MEU was moved from the ARG to the Pakistani port of Pasni (at night), and then moved by helicopter, C-130s, and U.S. Air Force C-17s, through a Pakistani inland air base, and finally to Camp Rhino, not far from Kandahar, arriving November 26, 2001. In a later case, the MEU was unloaded off the ARG in Qatar, and transported by air from there into Afghanistan.

## All the Little Cases

Figure 9. All the other little cases of ARG/MEU responses to situations



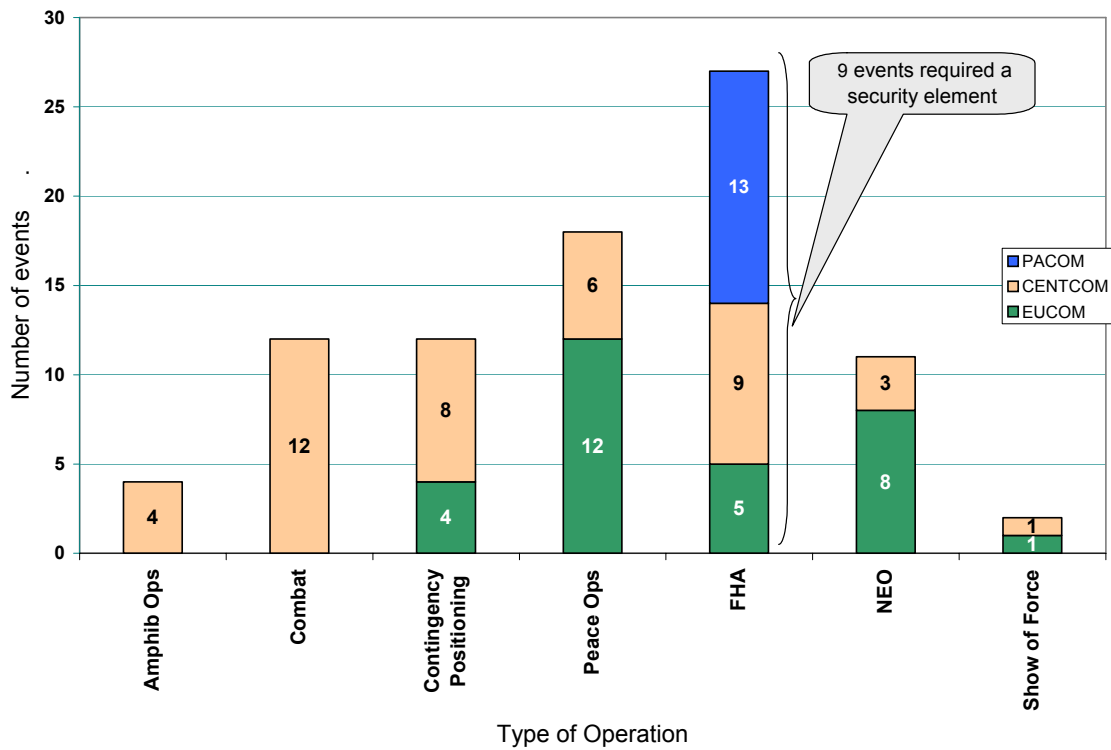
We show here all the rest of the cases—13 in all, through 2002—that did not involve repeated visits to a given country or area (e.g., the Adriatic Sea). Note that 6 of the 13 cases were what we call “contingent positioning,” that is, the ARG/MEUs were moved into the area in case the U.S. Government made a decision to carry out a response to a situation. The contingent positioning cases shown here were mostly for NEOs that in the event were not executed (or the American citizens were evacuated by other means, usually commercial air).

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# Analysis of force employment

Building upon our earlier work, figure 10 shows the number of operations (events) in seven operational categories in which forward-deployed MEUs were employed from 1990 to 2005.<sup>5</sup>

Figure 10. MEU employment events, 1990-2005<sup>1</sup>



1. Amphibious operations are closely associated with combat and include: amphibious raid, demonstration, and withdrawal.

5. Data derived from an ongoing CNA study of historic MEU employment.

The following sections discuss responsiveness, number of personnel moved ashore, how forces moved ashore, people evacuated and treated, tonnage moved in support of FHA operations, length of operations, and size of operations.

## Response to situations (days)

When considering responsiveness to situations, an important metric considering is how long it took the ARG/MEUs over the 16-year period to arrive at their respective areas of operation.

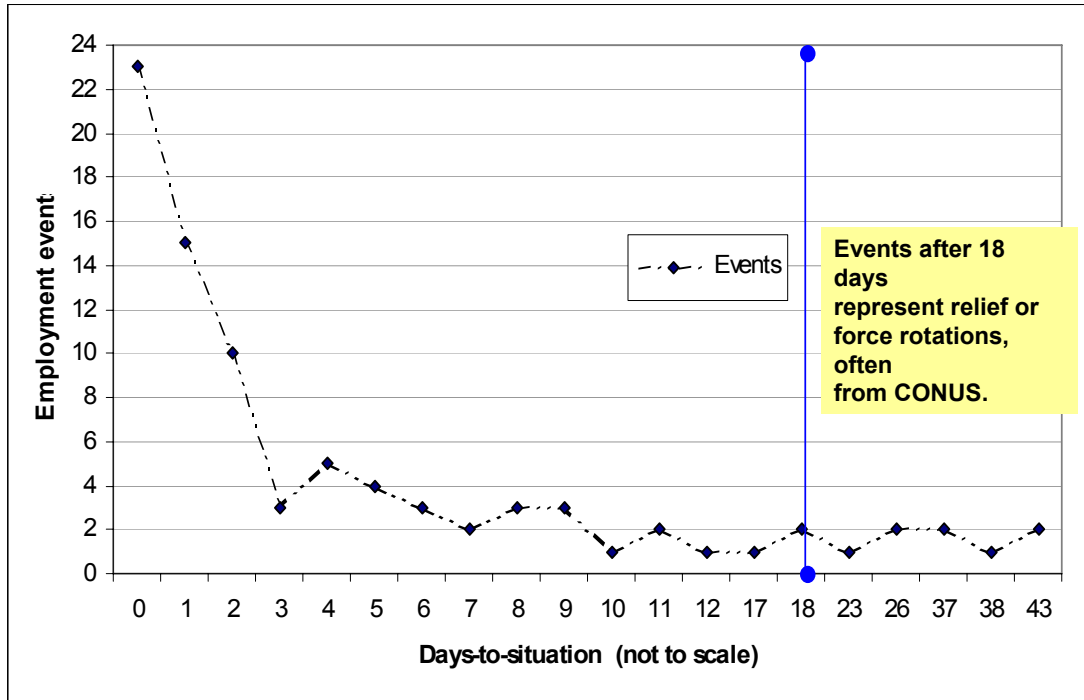
We evaluated 86 cases from the data set presented in appendix A.<sup>6</sup> **Figure 11 shows the results.** In 23 cases, the ARG/MEU was already in the areas of operation. About 60 percent of the time, the ARG/MEU arrived at the situation within 3 days (that's where the break in the curve appears.)

The ARG/MEU arrived or was in the general location of the situation within 7 days, primarily because at least two ARG/MEUs have been forward deployed at all times during the period studied. The forward command element (FCE) and/or Marine Assessment and Liaison Teams (MALTs) generally arrive earlier, often by commercial air or by organic KC-130 aircraft that are on call to support the MEU. Responses taking 18 days or more usually represent relief or force rotations, often from CONUS.

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6. Four data points were rejected. Three were noted in table 1. One was the result of the a gap in reporting.

Figure 11. Time in Days to Reach situation



## Number of personnel moved ashore

Appendix B includes 53 cases with information about the numbers of personnel going ashore. Figure 12 shows the distribution of personnel ashore per case. Note that thirty-nine of the 53 cases in figure 12 reflect cases with less than 1000 passengers. Table 1 shows the distribution of personnel ashore by size of the MEU element.

Figure 12. Number of People Moved Ashore .

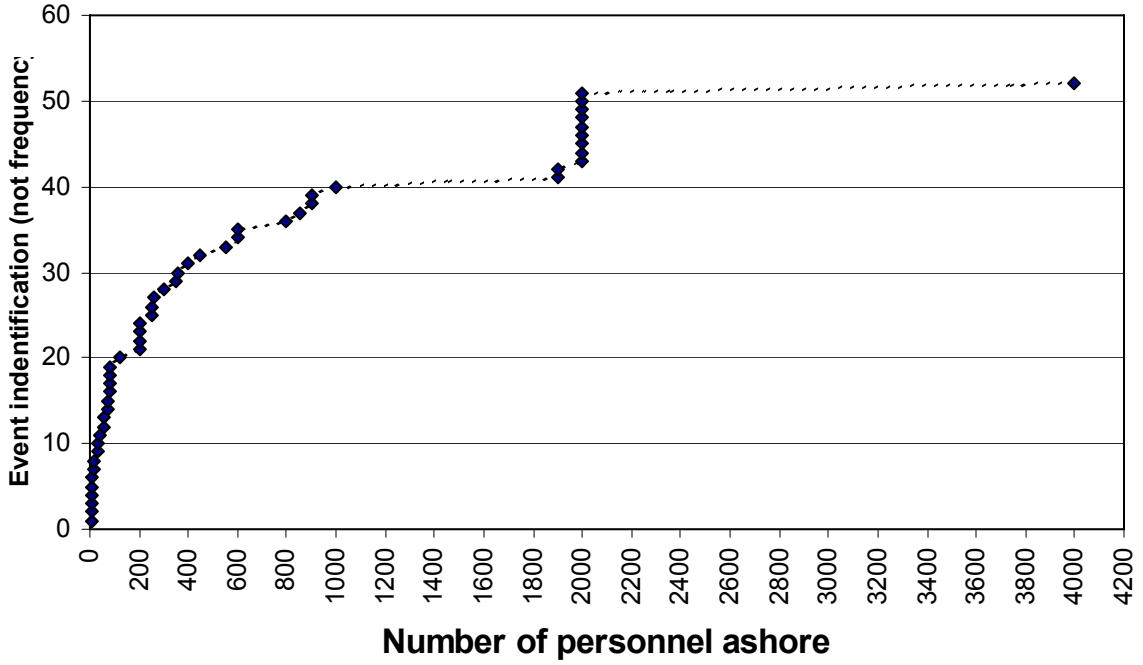
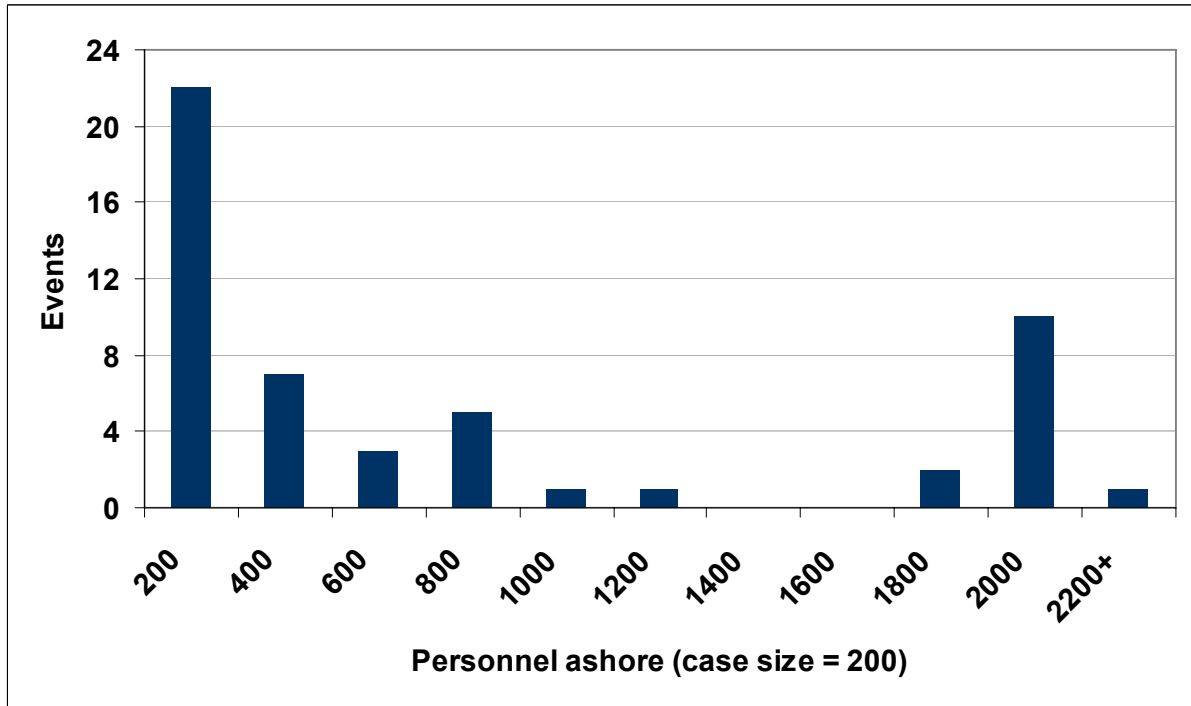


Figure 13 shows a histogram of events based on a case size of 200.

Figure 13. Histogram of people going ashore



## How forces moved ashore

When comparing employment of ARG/MEU forces ashore, it is important to note the mode of transportation from ship to shore. Table 2 shows the mode of transport for the events presented in appendix B. Those involve only “helo” are usually the very small cases where only a Forward Command Element or MAST were sent ashore to coordinate operations. Note that **none** were by surface only. It was the larger operations that used helo and surface transportation, as for the landing of a MEU in Pakistan en route to Camp Rhino in Afghanistan.

Information presented in the table was gleaned from the MEU histories. The **unknown** cases were those in which the command chronologies did not reflect how the MEU or its elements went ashore. In many cases, we do not have information on **how many** aircraft or the **number of sorties** employed to move personnel and equipment ashore. Finally, it is worth noting that in 14 of the 90 cases in the data base, none of the MEU personnel went ashore. At least 6 of these would have been the “contingent positioning” cases shown in the “other small responses” chart shown earlier.

Table 2. Mode of transport

Mode of transport	Number of events
Helo	26
Helo/KC-130	4
Helo and surface	34
Surface only	0
Didn't go ashore	14
Unknown	12
Total	90

## People evacuated or treated

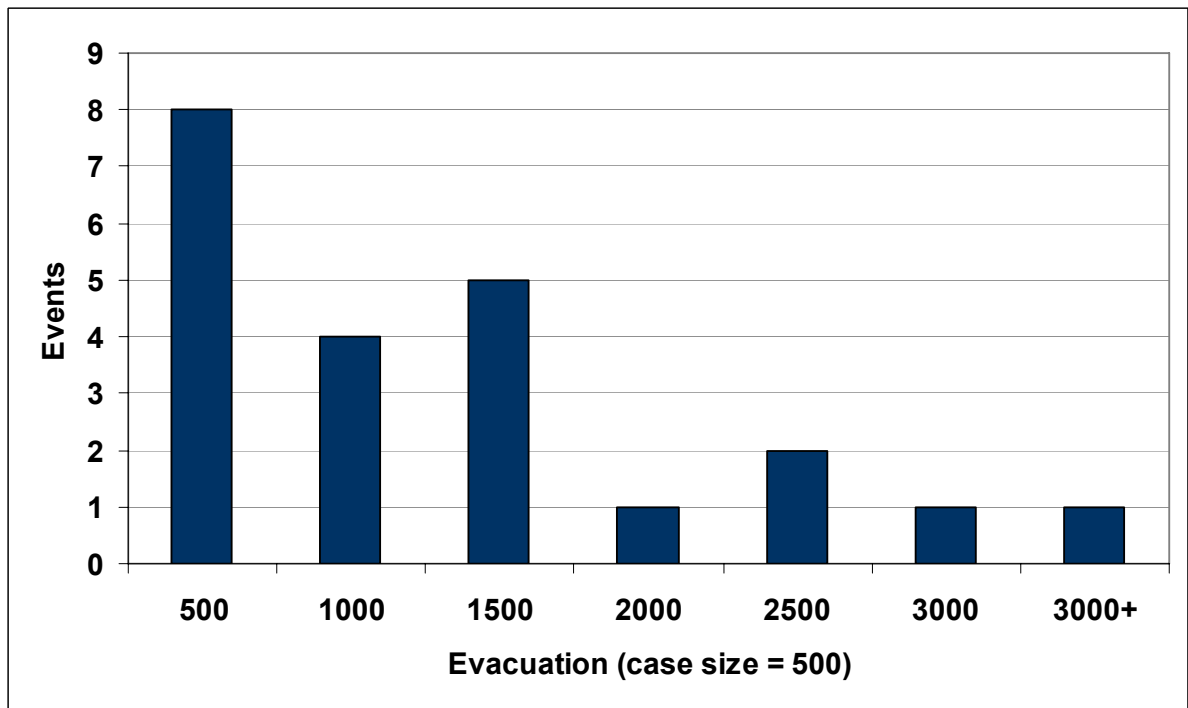
The data set presented in Appendix B identified 22 cases where people were either evacuated in a NEO or were provided health services during humanitarian operations. Table 3 shows the distribution of the cases.

Table 3. Distribution of people evacuated or treated

Size of MEU element ashore	Number of events	Average persons evacuated or treated
Small	7	1,505
Modest	10	966
Large	4	1,002
Unknown	1	2,500

Figure 14 is a histogram of this data where case size equals 500, for example 1 to 500, 501 to 1000, etc.

Figure 14. Histogram of people evacuated or treated



## Tons moved in support of FHA missions

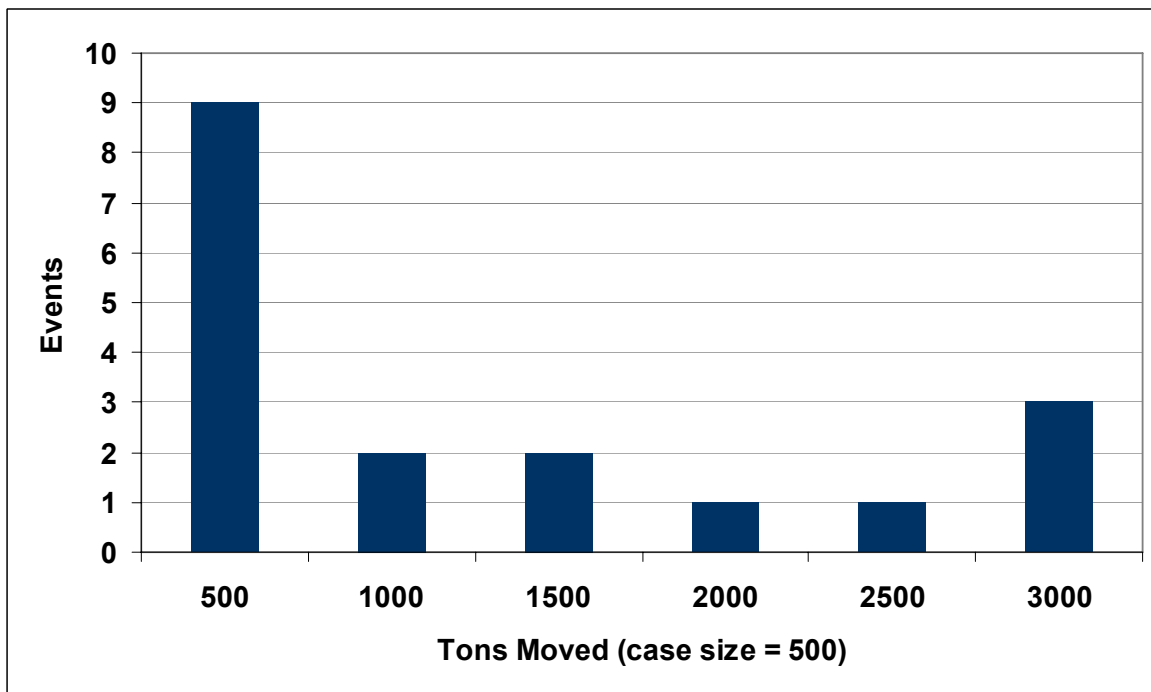
We identified 16 cases where cargo (expressed in tons in the MEU histories) in support of humanitarian missions was identified. Table 4 shows the distribution of the cases.

Table 4. Distribution of tons moved

Size of MEU element	Number of events	Average tons moved
Small	5	1,034
Modest	7	468
Large	4	1,086

Figure 15 is a histogram of tons moved in support of FHA missions. More than half of the moves were less than 500 tons.

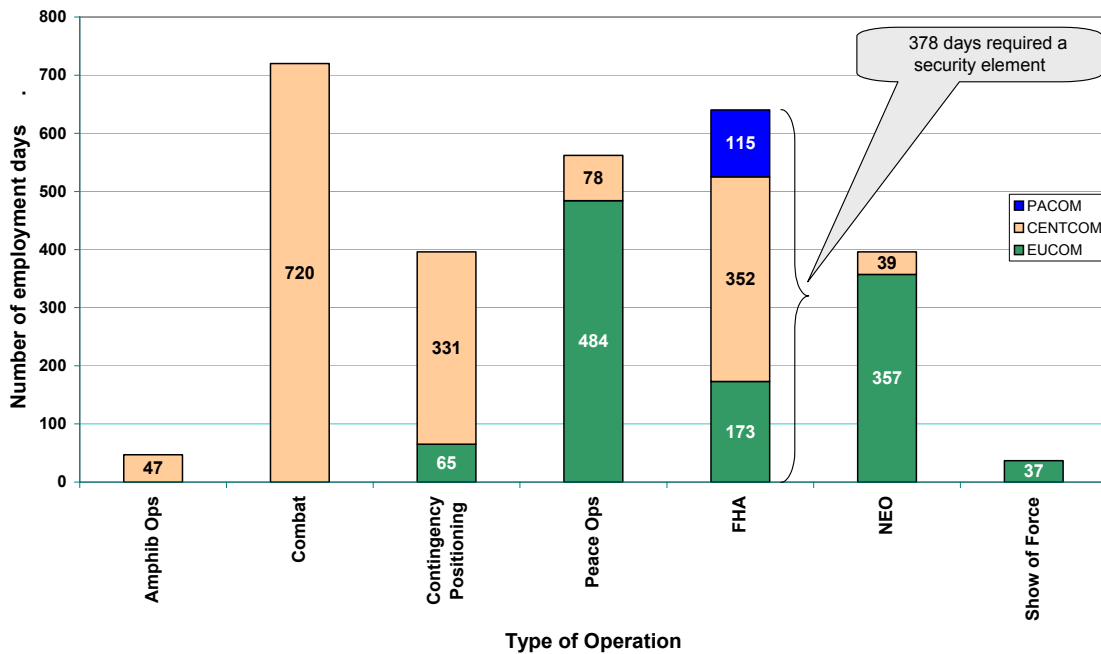
Figure 15. Histogram of tons moved



## Length of operations

Figure 16 depicts the cumulative employment days of forward-deployed MEUs in seven operational categories across the major combatant commands. It shows the number of days a MEU was employed in these responses from 1990 to 2005.

Figure 16. MEU employment days, 1990 - 2005



The CONUS-based MEUs were employed in these responses about 39 percent of their time in theater.<sup>7</sup> “Presence” is calculated as the fraction of calendar days a MEU was present in either PACOM or CENTCOM.

7. Calculation is based on possible employment days over the 16 year period, or  $16 \text{ yr} \times 365.25 \text{ d/yr} \times 1.2 \text{ presence} = 7,013 \text{ days}$ . The presence data of 1.2 was obtained from the Office of the Secretary of Defense (OSD), PA&E.

The forward deployed naval force MEU, i.e., the one based in Sasebo, Japan, was employed 65 of 115 days in humanitarian operations upon its deployment from Sasebo.<sup>8</sup> CONUS- based MEUs contributed to presence in PACOM during transit to CENTCOM, however, and this presence actually resulted in times engaged in nationally-ordered responses to situations in PACOM, as presented below.

Figures 17 and 18 profile the previous seven categories by employment days. The data was sorted by employment days so one might get a sense of employment frequency and duration. Figure 17 profiles FHA, peace operations, and “in harm’s way” responses.<sup>9</sup> From 1990 to 2005, MEUs participated in 27 FHA responses, which about was twice the number of responses that were considered to be “in harm’s way.” The total time committed to harm’s way responses and FHA, however, was about the same, so the average harm’s way commitment was about twice as long as the average FHA commitment—which makes sense, in that humanitarian relief efforts tend to involve immediate mitigation of the circumstances. In this limited data set, the total PACOM FHA mission commitment was considerably shorter. For EUCOM and CENTCOM combined, the average commitment was 35 days, still significantly shorter than the harm’s way commitment.

Support of peace support operations reflect a similar pattern—78 percent of peace support operations lasted less than 35 days. About one-third of FHA events required a security element, which was within the capability of the MEU. These accounted for about 60 percent for of the humanitarian responses’ time.

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8. Because of its forward basing in Sasebo, Japan, the 31st MEU’s presence in PACOM is calculated differently, that is, as the fraction of calendar days they are available for deployment and not tied up in maintenance. The 31st MEU’s “presence” in PACOM was about 0.8 from 1990 to 2005.

9. We define “in harm’s way” responses to be any where the force must be prepared for violence, conflict, or to defend itself in a situation of instability. This includes actual conflicts (as in Iraq and Afghanistan), NEOs, and shows of force. We have defined FHA responses as those where the prospects of the forces having to shoot are essentially nil.

Figure 17. FHA, peace operations, and combat employment intensity

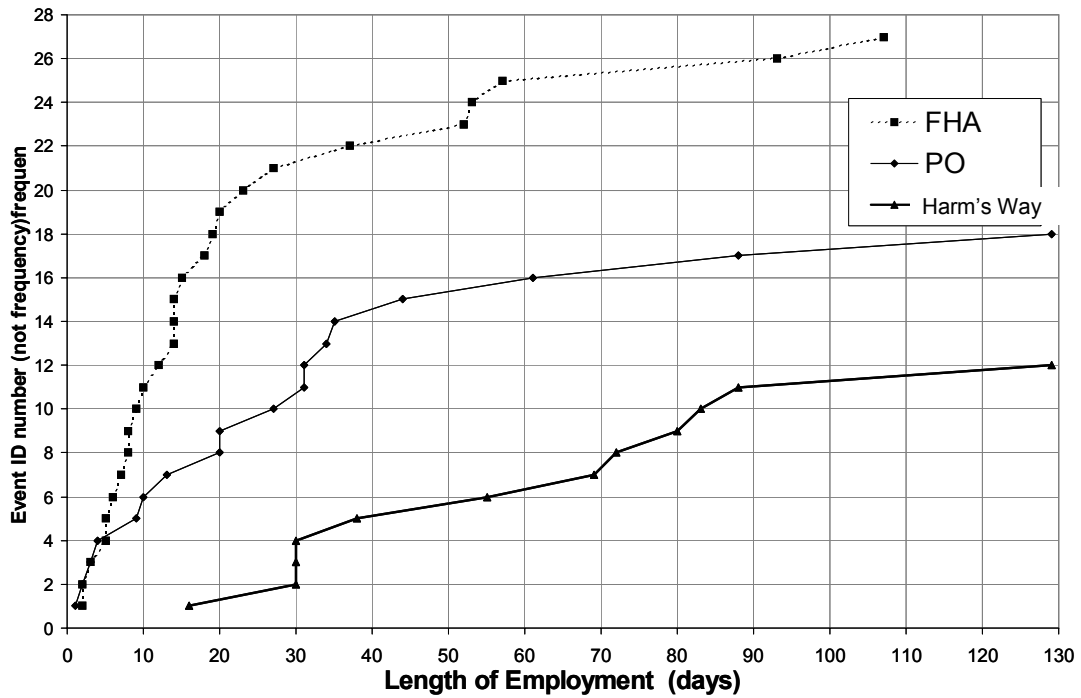


Figure 18 profiles amphibious operations, contingency positioning, NEO, and show of force operations. Again, support of these types of operations is generally less than 30 days. Longer operations are a reflection of continuing crises.

Figure 18. Amphib ops, contingency positioning, NEO, and show of force employment intensity

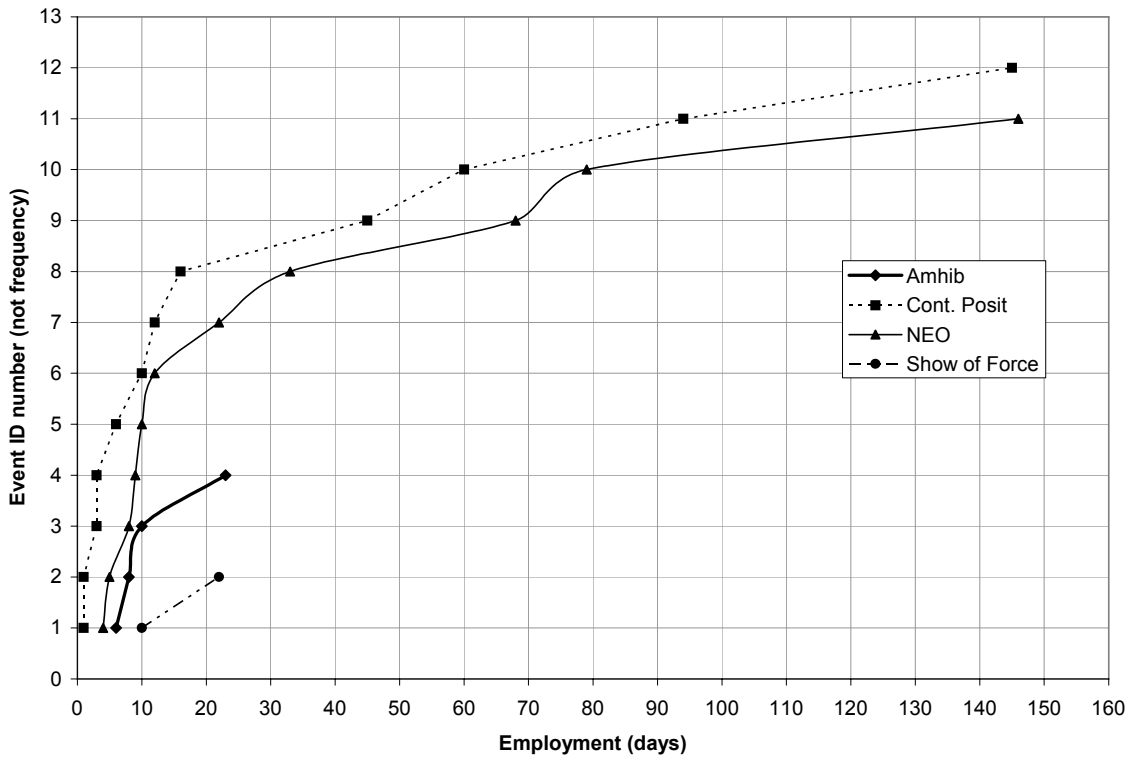


Table 5 summarizes employment in the seven operational categories.

Table 5. Average MEU commitment to mission categories, 1990-2005

Mission	Minimum commitment (days)	Maximum commitment (days)	Average commitment (days)
Amphibious operations <sup>1</sup>	6	23	12
Combat <sup>2</sup>	16	129	60
Contingency positioning	1	145	31
Peace ops	1	129	31
FHA <sup>3</sup>	2	107	24 <sup>4</sup>
NEO	4	146	36
Show of force	10	22	16

1. Includes demonstration, raid, and withdrawal.

2. Two outliers were removed from the data set.

3. One outlier was removed from the data set.

4. The average PACOM FHA commitment was 9 days; the combined average for EUCCOM and CENTCOM was 35 days.

## Size of operations

Table 6 shows the distribution of operations by COCOM.

Table 6. Size of operation by COCOM

	CENTCOM	EUCCOM	PACOM	Total
Small <sup>1</sup>	10	8	4	22
Modest <sup>2</sup>	12	4	7	23
Large <sup>3</sup>	15	6	1	22
Unknown	5	4	1	10
n/a <sup>4</sup>	3	9	0	12
Total	45	31	13	89

1. **Small:** FCE and liaison personnel; general less than 100 ashore.

2. **Modest:** Bn(-), company size employment, or FCE plus security element; generally between 100 and 500 personnel ashore.

3. **Large:** major elements of the MEU; generally more than 500 ashore.

4. **n/a:** Marine didn't do ashore, or the event was cancelled.

Table 7 shows size of operation and type.

Table 7. Size of operation by type

	Amphib Ops	Combat	Cont. Position -ing	Pease Ops	FHA	NEO	Show of Force	Other	Total
Small	0	1	6	5	6	3	0	2	23
Modest	3	2	1	0	12	5	0	0	23
Large	1	8	1	3	7	1	1	0	22
Unknown	0	3	3	1	2	1	0	0	10
n/a	0	0	1	8	1	0	1	0	11
Total	4	14	12	17	28	10	2	2	89

## Some reflections on the use of HSVs

This was an analysis of historical experience in U.S. Government-ordered responses to various situations with amphibious ships and their embarked Marines, helos, and surface craft. We have compiled times of responses, the military personnel who went ashore, how they got ashore, what they took ashore in relief supplies, how many people they may have evacuated, and how long they were involved in the situation. We have not evaluated the success of those responses or whether they could have been done quicker, more efficiently, or more effectively. For the current period, 2001-2006, the U.S. operations in Iraq and Afghanistan are continuing without ends in sight, at the time of this writing. Other responses have become routine operations, again without ends in sight, like CJTF HOA (on land), Operative Active Endeavor (surface combatants at sea in the Mediterranean), and JTF GTMO (on land). Characteristic of the responses involving amphibious ships is that the ships respond and then leave—unless there are relief rotations involved (as for Somalia, the Adriatic, and operations off Iraq in the 1990s).

However, knowing that PA&E was engaged in assessing the utility of HSVs for future responses, we have done some speculation—not any kind of detailed analysis—as to their utility, again bearing in mind that we did not analyze the efficiency and effectiveness of the historical responses.

The prime issue for force analysis has seemed to be “speed of response.” In the abstract, this is a demanding concept. That is, in the abstract, staffs conjecture that most perilous situations appear out of the blue and the assumption is that the U.S. would have to respond very fast. In reality, most situations to which the U.S. responded, as shown in the 1990-2006 data base, and particularly those singled out for amphibious ships to respond to alone (leaving aside the two big Iraq wars and the response into Afghanistan), were brewing for some time before the U.S. got around to responding. Luckily, the practice

was long to have ARG/MEUs on routine deployment, especially in the Mediterranean, the Persian Gulf, and the Western Pacific, so it turned out, per our analysis, that the preponderance of their responses were in the 0-7 day range. We do know that an HSV such as the *WestPac Express* can make 33 knots underway when loaded with cargo and passengers, which is about 1.5 time the speed of advance (SOA) of amphibious ships making best speed.<sup>10</sup> The question is whether this 1.5-times speed advantage would have made a difference in these situations, but we cannot judge from the histories. Suffice to say, there were no disasters or significant harm to U.S. foreign policy that we knew of.

We were able to identify several missions and events that might have been performed by a JHSV had they been available over the 16-year period documented in Appendix B. Of the 86 missions cited there, only 8 (about 10 percent) qualify unambiguously as potential JHSV missions. Another 14 missions might have employed a JHSV to ferry humanitarian assistance material to affected areas. We did not obtain data from the MEU histories on equipment densities employed by Marines going ashore. A single JHSV as projected could transport 970 passengers with a payload of 306 short tons.<sup>11</sup> This represents about 20 days of support for 1,000 internally displaced persons.<sup>12</sup>

Table 8 highlights these results.

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10. Maximum speed of an HSV (empty) is about 42 knots.

11. Payload is increased to 425 short tons with no passengers.

12. For additional information on HADR packaging, see [1].

Table 8. Notional substitution of JHSV in support of missions performed by ARG/MEU

Type of Operation	Events	Candidate for JHSV	Size (S/M/L) <sup>1</sup>	Importance of Speed (NI/I) <sup>2</sup>	Mode of Transport (H,S,U) <sup>3</sup>	Loiter (Y/N) <sup>4</sup>	Port Suitability (Y/N)
Amphibious Operations <sup>5</sup>	4	None	n/a	NI	H	N	n/a
Combat <sup>6</sup>	12	2	S(1), M(1)	NI	U	N	Y
Contingent Positioning <sup>7</sup>	12	1	S(1)	I	U	N	Y
Peace Operations <sup>8</sup>	18	None	n/a	I	H	Y(12)	n/a
FHA (Basic) <sup>9</sup>	18	4	M(4)	I	S	Y	Y
FHA (Security) <sup>10</sup>	9	None	n/a	I	H	Y(4)	n/a
NEO <sup>11</sup>	11	1	M(1)	I	S	N	Y
Show of Force <sup>12</sup>	2	None	n/a	I	H	N	Y

1. Small, Modest, Large

2. Not important (NI); Important (I)

3. Helo, Surface, Unknown

4. Yes, No, not applicable (n/a)

5. Amphibious raid with surface craft possible.

6. Small unit could be delivered to response situation.

7. Probably not good for loitering, considering fuel consumption. Could deliver an FCE or MSALT.

8. 12 of 18 situations required loiter time of 10 days or more.

9. HSV could have been used for all 18 events to transport HADR material.

10. Could require security element poised for quick heliborne reaction; HSV could sustain one helo.

11. HSVs probably limited in numbers of evacuees and distance to safe havens.

12. HSVs do not seem appropriate as “show of force.”

Weather could be a problem for JHSVs. According to Marines in III MEF, seasonal shifts in weather patterns can impact operations. For example, the *WestPac Express*—a leased HSV—is not employed in sea states higher than 2. Unfortunately, we don’t have weather data on the MEU deployments identified in appendix B, so we can’t make historical comparisons in this area.

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## Key takeaways

Some key takeaways from the historical experience might be as follows:

As shown in the updated database of U.S. responses to situations in the period 1990-2006, the U.S. conducts big, long responses with joint forces more or less deliberately mobilized and deployed (as for Iraq and Afghanistan and lots of small, short responses (as for NEOs, support for peace operations, and humanitarian relief).

The numbers of U.S. responses dropped drastically after the war over Kosovo was ended in mid-1999. Instead, the U.S. has become engaged in the long-running Iraq, Afghanistan, and Horn of Africa operations and naval patrols in the Mediterranean, off Somalia, and Persian Gulf. In addition, the war on terror has involved the Noble Eagle air patrols and readiness for reaction over the United States, training missions in the southern Philippines, and operation of the Guantanamo Bay detention center. Responses for NEOs and humanitarian relief are few, scattered, and short, though the U.S. has partially restored its image in responses to natural disasters in the Indian Ocean and the earthquake in Pakistan.

Amphibious ships are involved in the many of the U.S. responses—typically deployed as ARG/MEUs, sometimes as individual ships, but extremely rarely as more than ARG/MEU (except for the big joint operations, i.e., Iraq). (In the past, though, the great preponderance of humanitarian relief, in the form of delivering relief supplies, has been by the U.S. Air Force.)

It has been of great advantage for the smaller responses in disparate parts of the world for the ARG-MEUs to have been already on their regular overseas deployments and to have one ARG/MEU forward-deployed in Japan. Thus, their times of response upon receiving EXORDs have been mostly rather short—zero to seven days.

What the ARG/MEUs have delivered ashore for their missions has varied greatly—in this analysis, we have seen roughly one-third splits among (1) small (e.g., just a Forward Command Element or other coordinating group on the ground), (2) modest, and finally (3) larger operations ashore involving a Battalion Landing Team. (The huge involvements of Marines in Iraq and Afghanistan lie beyond this analysis of the use of amphibious ships.)

The offshore loiter capabilities of amphibious ships seem to have been of advantage. That is, there are numerous instances of what we call “contingent positioning,” when the ships are moved toward a situation or even to simply wait just offshore while the U.S. Government decides on a mission or to intervene. They also serve as offshore hotels for the rotation of units from the shore to ship, or if the host country prefers that they not camp out ashore.

We did not do any detailed analysis of the utility of JHSVs for these responses, though we have made some observations and commentaries. In our analysis of the historical responses, we did not see particular advantages to speedier responses. That is, we did not know of any situations that got more out of hand than they were already because of the few more days that it took to respond.

Perhaps more importantly, the loitering and sustainment capabilities of the existing amphibious ships—their sea-basing aspects, as it were—seem to have appreciable advantages over HSVs. The capabilities of the amphibious ships to operate and sustain helos for ship-to-shore deliveries of ranges of personnel and material seem a particular advantage over HSVs. But we did not do any analysis of whether a mix of amphibious ships and HSVs might have offered advantages over operations as historically carried out.

# Appendix A: Updated Spreadsheet on Responses to Situations

The following spreadsheet covers U.S. Naval Forces Responses to Situations in the period 2001-2006—in reverse chronological order (i.e., from 2006 back). It is an update to the spreadsheet in reference [3]. Reference [3] actually covers all U.S. services responses, but that information in detail was not available to this project. Nevertheless, all the larger operations shown—e.g., OEF, OIF, CJTF HOA, JTF Katrina—were joint and involved the several services. These cases, however, allowed us to track the involvement of ARG/MEUs in these responses.

In the last column, “Duration,” where no number of days is shown means that the operation is ongoing at the time of this writing (e.g., OIF and OEF in Afghanistan).

The table below is the key to the shading of each line. In the Lebanon case in the summer of 2006, the initial action was of a NEO from Beirut, but the ships involved also moved humanitarian relief supplies ashore, so those two colors are shown on that line.

Table 9. Shading of types of responses

Combat (even if sporadic)	
Show of Force	
Contingent Positioning	
Support to Peacekeepers	
NEOs	
Humanitarian Relief	

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Mission Name	M. Type	AOR	Country	Event Date	End Date	Duration
Lebanon NEO, HA	NEO & HA	EUR, CENT	Lebanon	18-Jul-06	30-Sep-06	75
Indonesia EQ HA/DR	Human. Assist/Disaster Relief	PAC	Indonesia	27-May-06	16-Jun-06	21
Operation Hope Renewal	Human. Assist/Disaster Relief	PAC	Philippines	17-Feb-06	3-Mar-06	15
Hurricane Wilma Support	Human. Assist	NORTH	USA	24-Oct-05	14-Nov-05	22
OEF-Counter-Piracy Ops	Counter-Piracy / Combatting Terrorism	CENT	Somalia	17-Oct-05	25-Aug-06	313
Pakistan Earthquake Relief	Human. Assist	CENT	Pakistan	8-Oct-05	9-Apr-06	184
JTF Rita	Human. Assist	NORTH	USA	24-Sep-05	6-Oct-05	13
JTF Katrina	Disaster Relief	NORTH	USA	29-Aug-05	12-Oct-05	45
Unified Assistance 2	Disaster Relief	PAC	Indonesia	28-Mar-05	30-Apr-05	34
Unified Assistance	Disaster Relief	PAC	Indonesia, Malaysia, Sri Lanka, Thailand	26-Dec-04	16-Mar-05	81
Secure Tomorrow	Peace ops	SOUTH	Haiti	29-Feb-04	1-Jun-04	94
Shining Express	Peacekeeping	EUR	Liberia	8-Jun-03	30-Sep-03	115
Iraqi Freedom	Reconstruction & Stabilization Operations	CENT	Iraq	2-May-03	Ongoing	
Iraqi Freedom	Large Scale Combat Operations	CENT	Iraq	20-Mar-03	1-May-03	43
FDO-Alpha	Show of Force	PAC	N. Korea	6-Feb-03	17-May-03	101
OEF-CJTF Horn of Africa	Combatting Terrorism	CENT	Djibouti, HOA	19-Oct-02	Ongoing	
OEF-Iraq	Contingent Positioning/Show of force	CENT	Iraq	1-Nov-02	19-Mar-03	139
OEF-Philippines	Combatting Terrorism	PAC	Philippines	21-Jan-02	Ongoing	
JTF-Guantanamo	Combatting Terrorism	SOUTH	Cuba	6-Jan-02	Ongoing	
OEF-Active Endeavor	Combatting Terrorism	EUR	Mediterranea n	26-Oct-01	Ongoing	
OEF-Afghanistan	Combatting Terrorism	CENT	Afghanistan	16-Sep-01	Ongoing	
Noble Eagle	Combatting Terrorism	JFCOM, NORTH	USA	11-Sep-01	Ongoing	
EP-3 Crisis	Contingent Positioning	PACOM	China	2-Apr-01	3-Apr-01	2
Passive Oversight 01-01	Spt. to Civil Auth.	SOUTH	Cuba	21-Feb-01	24-Feb-01	4
Greenville Ehima Maru	Spt. to Civil Auth.	PAC	USA/Japan	9-Feb-01	3-Mar-01	23
Indian earthquake	Human. Assist	PAC	India	27-Jan-01	19-Feb-01	24
El Salvador earthquake	Human. Assist	SOUTH	El Salvador	13-Jan-01	27-Jan-01	15



## Appendix B: MEU Employment

Table 10 (part A) and table 9 (part B) provide source data for the MEU deployments. They are linked by an index number in the first column.

This data is a distillation and synthesis of available data obtained from U.S. Marine Corps command chronologies, operational summaries, and Navy deployment timelines extracted from programs such as WebSked.

There are some gaps in the 16-year data set (1990 to 2005). Some command chronologies are missing in the Marine Corps' archives while others are still being declassified and processed. Over the 16-year period, we noted about 15 missing MEU command chronologies. Since many operations straddled more than one command chronology, we were able to reconstruct many of the events based on other sources such as Navy deployment timelines. For example, an operation may have been documented (nature of operation, force employment, metrics, etc.) substantially in one command chronology but termination of the event is unknown because the next command chronology in the reporting chain was missing. Because we relied upon multiple sources of information, including command chronologies of major subordinate commands, we were able to reconstruct when many operations might have terminated based on generally known planning factors such as equipment preparation time, agricultural inspections, speed of advance, etc.

Finally, some data within the table are estimates based upon the nature of an operation and Marine Corps' doctrine and tactics, techniques, and procedures. Because there are so many data element in the tables

Table 10. MEU deployments (1990 - 2005), part A

Index	MEB/ MEU	Marine Dep Date	Marine End Date	COCOM	GEO/Location Position		Year	Type Operation	Date/Position of Response	
					Response Case	Operation			Start	Starting Position
1	24	12-Oct-89	10-Apr-90	EUCOM	Other	Tunisia	1990	HAO	8-Feb-90	IPT August Bay, IT
2	22	8-Mar-90	6-Sep-90	EUCOM	Liberia	Sharp Edge	1990	NEO	24-May-90	IPT Toulon, France
3	13	19-Jun-90	16-Apr-91	CENTCOM	Iraq	Desert Sting/ Desert Storm	1991	Amphibious Raid	12-Jan-91	MODLOC U.A.E.
4	13	19-Jun-90	16-Apr-91	CENTCOM	Iraq	Desert Storm	1991	Amphibious Demo	24-Feb-91	MODLOC U.A.E.
5	26	7-Aug-90	2-Mar-91	EUCOM	Liberia	Sharp Edge	1990	NEO	16-Aug-90	Relief in place
6	4th MEB	17-Aug-90	18-Apr-91	CENTCOM	Iraq	Desert Shield	1990	Combat	10-Aug-90	Moorehead City, North Carolina
7	4th MEB	19-Aug-90	18-Apr-91	CENTCOM	Somalia	Eastern Exit	1991	NEO	5-Jan-91	Oman
8	11	1-Dec-90	13-Aug-91	CENTCOM	Other	Ethiopia	1991	Contingency Positioning (NEO)	2-Jun-91	En route to Abu Dhabi, UAE
9	5th MEB	1-Dec-90		CENTCOM	Iraq	Desert Storm	1990	Combat	1-Dec-90	
10	5th MEB	1-Dec-90		PACOM	Other	Sea Angel	1991	HAO	11-May-91	En route to West Coast form NAG
11	24	24-Jan-91	6-Aug-91	EUCOM	Iraq	Provide Com- fort	1991	HAO (Security Ops)	10-Apr-91	IPT Sardinia, Italy
12	15	29-May-91	26-Nov-91	PACOM	Other	Fiery Vigil	1991	HAO	16-Jun-91	Iwo Jima en route to Hong Kong
13	22	17-Sep-91	15-Mar-92	CENTCOM	Other	Red Reef	1992	HAO	20-Jan-92	

Table 10. MEU deployments (1990 - 2005), part A (continued)

Index	MEB / MEU	Marine Dep Date	Marine End Date	COCOM	GEO/Location Position		Year	Date/Position of Response		
					Response Case	Operation		Type Operation	Start	Starting Position
14	24	6-Dec-91	3-Jun-92	EUCOM	Other	Hot Rock	1992	HAO	8-Apr-92	Tran-Med from Civitavecchia, Italy to Izmir, Turkey
15	11	28-May-92	24-Nov-92	CENTCOM	Somalia	Impressive Lift/ Transport of Pakistani Forces	1992	Peace Ops	11-Sep-92	Exiting SOH en route to Singapore
16	15	16-Oct-92	15-Apr-93	CENTCOM	Somalia	Restore Hope	1992	HAO (Security Ops)	25-Nov-92	Exiting Malacca Straits
17	22	20-Oct-92	16-Apr-93	EUCOM	Other	Democratic Republic of Congo	1992	Contingency Positioning (NEO)	2-Nov-92	Rota, Spain
18	24	24-Feb-93	18-Aug-93	CENTCOM	Somalia	Restore Hope	1993	HAO (Security Ops)	24-Feb-93	Norfolk (Transit Atlantic / Mediterranean Sea / Red Sea to Somalia)
19	26	17-Mar-93	10-Sep-93	EUCOM	Adriatic	Provide Promise, Deny Flight	1993	Peace Ops	10-Apr-93	
20	22	11-Aug-93	4-Feb-94	CENTCOM	Somalia	Restore Hope	1993	HAO (Security Ops)	10-Oct-93	Black Sea / Bulgaria
21	22	12-Aug-93	4-Feb-94		Adriatic	Provide Promise, Deny Flight	1993	Peace Ops	12-Sep	Sierra De Retin, Spain
22	13	3-Sep-93	17-Mar-94	CENTCOM	Somalia	Continued Hope, Show Care, More Care	1993	HAO (Security Ops)	18-Oct-93	Singapore

Table 10. MEU deployments (1990 - 2005), part A (continued)

Index	MEB / MEU	Marine Dep Date	Marine End Date	GEO/Location Position		Date/Position of Response				
				Response Case	Operation	Year	Type Operation	Start	Starting Position	
23	24	6-Jan-94	23-Jun-94	CENTCOM	Somalia	Continue Hope, Quickdraw	1994	HAO (Security Ops)	6-Jan-94	Norfolk (Transit Atlantic / Mediterranean Sea / Red Sea to Somalia)
24	24	6-Jan-94	23-Jun-94	EUCOM	Adriatic	Provide Promise/Deny Flight	1994	Contingency Positioning (NEO)	26-May-94	Mediterranean Sea VIC Italy and Greece
25	26	22-May-94	16-Nov-94	CENTCOM	Somalia	Somalia	1994	Contingency Positioning (NEO)	25-Jun-94	Souda Bay, Greece
26	15	9-Jun-94	9-Dec-94	CENTCOM	Other	Support Hope	1994	HAO	29-Jul-94	Diverted from Indian Ocean transit to Jordan
27	15	9-Jun-94	9-Dec-94	CENTCOM	Somalia	USLO Withdrawal	1994	Amphibious Withdrawal	1-Sep-94	Jebel Ali, Upkeep until 1 Sep
28	15	9-Jun-94	9-Dec-94	CENTCOM	Iraq	Vigilant Warrior, Kuwait	1994	Show of Force	8-Oct-94	U.A.E. (Exercise Iron Magic)
29	22	21-Oct-94	19-Apr-95	EUCOM	Adriatic	Provide Promise/Deny Flight	1994	Peace Ops	23-Nov-94	Toulon France
30	22	21-Oct-94	19-Apr-95	EUCOM	Adriatic	Provide Promise/Deny Flight	1995	Peace Ops	30-Jan-95	Adriatic Sea
31	13	25-Oct-94	24-Apr-95	CENTCOM	Somalia	United Shield	1995	Amphibious Withdrawal	5-Feb-95	Kenya
32	24	23-Mar-95	22-Sep-95	EUCOM	Adriatic	Provide Promise, Deny Flight	1995	Peace Ops	29-May-95	En route from Naples, Italy

Table 10. MEU deployments (1990 - 2005), part A (continued)

Index	MEB / MEU	Marine Dep Date	Marine End Date	COCOM	GEO/Location Position		Year	Date/Position of Response		
					Response Case	Operation		Type Operation	Start	Starting Position
33	26	28-Aug-95	27-Feb-96	EUCOM	Adriatic	Sharp Guard, Deny Flight, Joint Endeavour	1996	Peace Ops	20-Nov-95	Augusta Bay, Italy
34	26	28-Aug-95	27-Feb-96	EUCOM		Contingency Planning	1996	NEO	31-Jan	Corfu, Greece
35	15	13-Nov-95	12-May-96	CENTCOM	Iraq	VBSS, Southern Watch	1996	Peace Ops	12/26/1995	MODLOC Kuwait
36	22	27-Jan-96	23-Jul-96	EUCOM	Liberia	ashored Response	1996	NEO	11-Apr-96	USS Guam IPT Trieste, Italy. ARG/MEU supporting presence mission in Adriatic Sea.
37	22	27-Jan-96	23-Jul-96	EUCOM	Other	Quick Response	1996	NEO	20-May-96	MODLOC VIC Monrovia, Liberia
38	13	19-Apr-96	18-Oct-96	CENTCOM	Iraq	Desert Strike	1996	Contingency Positioning (Combat)	1-Sep-96	Jebel Ali, UAE
39	24	28-Jun-96	21-Dec-96	EUCOM	Adriatic	Joint Endeavour	1996	Peace Ops	9-Aug	Corfu, Greece
40	26	26-Nov-96	21-May-97	EUCOM	Albania	Silver Lake	1997	NEO	13-Mar-97	Nassau IPT Republic of Malta; Nashville and Pensacola IPT Corfu, Greece
41	26	26-Nov-96	21-May-97	EUCOM	Other	Guardian Retrieval	1997	Peace Ops	22-Mar-97	Nassau IPT Republic of Malta; Nashville and Pensacola IPT Corfu, Greece

Table 10. MEU deployments (1990 - 2005), part A (continued)

Index	MEB / MEU	Marine Dep Date	Marine End Date	GEO/Location Position			Date/Position of Response			
				Response Case	Operation	Year	Type Operation	Start	Starting Position	
42	15	24-Mar-97	23-Sep-97	CENTCOM	Iraq	Southern Watch	1997	Peace Ops	11-Jul-97	MODLOC Kuwait
43	22	15-Apr-97	29-Oct-97	EUCOM	Other	Noble Obelisk	1997	NEO	28-May-97	Zaire
44	13	28-Aug-97	27-Feb-98	CENTCOM	Afghanistan	Silent Assurance	1997	Combat	4-Nov-97	PVST Jebel Ali
45	13	28-Aug-97	27-Feb-98	CENTCOM	Iraq	Southern Watch	1997	Peace Ops	2-Dec-97	MODLOC Kuwait
46	11	7-Feb-98	7-Aug-98	CENTCOM	Iraq	Southern Watch	1998	Peace Ops	22-Mar-98	San Diego
47	11	7-Feb-98	6-Aug-98	CENTCOM	Other	Safe Departure	1998	NEO	6-Jun-98	Aqaba, Jordan
48	26	28-Feb-98	25-Jul-98	EUCOM	Adriatic	Determine Falcon/Deliberate Guard	1998	Show of Force	12-Jun-98	Antalya, Turkey
49	15	22-Jun-98	21-Dec-98	CENTCOM	Other	Resolute Response	1998	Contingency Positioning (NEO)	4-Nov-98	5th Fleet chop line
50	15	22-Jun-98	21-Dec-98	CENTCOM	Iraq	Southern Watch	1998	Peace Ops	25-Sep-98	MODLOC Kuwait
51	22	1-Jul-98	8-Dec-98	EUCOM	Adriatic	embassy in Tirana, Albania / Balkan Calm	1998	HAO (Security Ops)	14-Aug-98	Rota, Spain (Austin); Saradinia (Saipan)
52	31	11-Nov-98	14-Mar-99	CENTCOM	Iraq/Other	Desert Fox/NEO Planning	1998	NEO	10-Nov-98	White Beach, Okinawa, Japan
53	13	5-Dec-98	5-Jun-99	CENTCOM	Other	Eritrea, Ethiopia, Djibouti	1999	Contingency Positioning (NEO)	25-Jan-99	Phuket, Thailand
54	13	5-Dec-98	5-Jun-99	CENTCOM	Other	Kenya	1999	HAO	18-Jan-99	Phuket, Thailand
55	26	16-Apr-99	12-Oct-99	EUCOM	Albania	Shining Hope; Noble Anvil; Allied Force	1999	HAO (Security Ops); Peace Ops	28-Apr-99	Transit Atlantic/Med

Table 10. MEU deployments (1990 - 2005), part A (continued)

Index	MEB / MEU	Marine Dep Date	Marine End Date	COCOM	GEO/Location Position		Year	Date/Position of Response		
					Response Case	Operation		Type Operation	Start	Starting Position
56	26	16-Apr-99	12-Oct-99	EUCOM	Kosovo	Joint Guardian	1999	Peace Ops	4-Jun-99	MODLOC VIC Tirana, Albany
57	26	16-Apr-99	12-Oct-99	EUCOM	Turkey	Avid Response	1999	HAO	18-Aug-99	Kearsarge IPT Palma, Spain; Gunston Hall IPT Ibiza, Spain; Ponce IPT Mallaga, Spain
58	31	1-Oct-99	6-Nov-99	PACOM	East Timor	Stabilise	1999	HAO	1-Oct-99	Okinawa, Japan
59	15	24-Jan-00	23-Jul-00	PACOM	East Timor	Stabilise	2000	HAO	19-Feb-00	Darwin, Australia
60	24	21-Feb-00	6-Aug-00	EUCOM	Kosovo	Dynamic Response	2000	Peace Ops	15-Mar-00	Sierra del Retin, Spain
61	26	13-Jul-00	18-Dec-00	EUCOM	Other	Presidential Support Visit	2000	Presidential Support	10-Oct-00	USS Saipan and Ashland MODLOC southern Adriatic Sea.
62	13	14-Aug-00	14-Feb-01	PACOM	East Timor	Bold Samaritan	2000	HAO	8-Sep-00	Australia Sustainment Training
63	31	8-Oct-00	18-Nov-00	PACOM	East Timor	Stabilise	2000	HAO	28-Oct-00	Darwin, Australia
64	22	1-Dec-00	21-May-01	EUCOM	Other	Other	2000	At Sea Rescue	20-Dec-00	Tran-Med from Spain to holiday ports
65	11	14-Mar-01	12-Sep-01	PACOM	East Timor	East Timor	2001	HAO (Security Ops)	9-Apr-01	Darwin, Australia
66	15	13-Aug-01	2-Mar-02	PACOM	East Timor	Stabilize	2001	HAO (Security Ops)	14-Sep-01	Darwin, Australia

Table 10. MEU deployments (1990 - 2005), part A (continued)

Index	MEB / MEU	Marine Dep		Marine End		COCOM		GEO/Location Position		Date/Position of Response		
		Date	Date	Date	Date	Case	Operation	Year	Type Operation	Start	Starting Position	
67	15	13-Aug-01	2-Mar-02	CENTCOM	Afghani- stan	OEF	OEF	2001	Contingency Positioning (NEO); Combat	3-Oct-01	MODLOC off coast of Paki- stan	
68	26	20-Sep-01	18-Apr-02	CENTCOM	Afghani- stan	OEF	OEF	2001	Combat	11-Nov-01	MODLOC VIC Ionian Sea	
69	13	1-Dec-01	17-Jun-02	CENTCOM	Other	Edge Mallet	Edge Mallet	2002	HAO	24-Jan-02	En route from Singapore	
70	13	1-Dec-01	17-Jun-02	CENTCOM	Afghani- stan	OEF	OEF	2002	Combat	4-Mar-02	MODLOC off the coast of Oman	
71	22	24-Feb-02	27-Aug-02	CENTCOM	Afghani- stan	Pakistan	Pakistan	2002	Contingency Positioning (Security Ops)	28-May-02	MODLOC off coast of Paki- stan (Trenton)	
72	11	15-Jun-02	14-Dec-02	CENTCOM	Other	JSOTF-CRE	JSOTF-CRE	2002	Contingency Positioning (Security Ops)	4-Jun-02	En route to Fifth Fleet AOR	
73	11	15-Jun-02	14-Dec-02	CENTCOM	Iraq	Pegasus Ven- ture/OEF	Pegasus Ven- ture/OEF	2002	Combat	24-Sep-02		
74	11	15-Jun-02	14-Dec-02	PACOM	East Timor	East Timor	East Timor	2002	HAO	17-Nov-02	Darwin, Aus- tralia	
75	24	26-Aug-02	29-May-03	EUCOM	Kosovo	Dynamic Response	Dynamic Response	2003	Peace Ops	12-Sep-02	Rota, Spain; in transit to Greece	
76	24	26-Aug-02	29-May-03	CENTCOM	Iraq	OIF	OIF	2003	Combat	28-Mar-03	HOA	
77	31	9-Oct-02	16-Nov-02	PACOM	East Timor	East Timor	East Timor	2002	HAO	9-Oct-02	Okinawa, Japan	
78	15	6-Jan-03	12-Jul-03	CENTCOM	Iraq	OIF	OIF	2003	Combat	24-Feb-03	MODLOC Kuwait	
79	2nd MEB	12-Jan-03	30-Jun-03	CENTCOM	Iraq	OIF	OIF	2003	Combat	17-Jan-03	San Diego	
80	2nd MEB	12-Jan-03	30-Jun-03	CENTCOM	Iraq	OIF	OIF	2003	Combat	15-Feb-03	Norfolk	

Table 10. MEU deployments (1990 - 2005), part A (continued)

Index	MEB / MEU	Marine Dep Date	Marine End Date	COCOM	GEO/Location Position		Year	Date/Position of Response		
					Response Case	Operation		Type Operation	Start	Starting Position
81	2nd MEB	12-Jan-03	30-Jun-03	EUCOM	Liberia	Shining Express		Contingency Positioning (NEO)	10-Jun-03	Transit Med
82	26	4-Mar-03	24-Oct-03	EUCOM	Liberia	Shining Express		Contingency Positioning (NEO)	25-Jul-03	
83	26	7-Mar-03	24-Oct-03	CENTCOM	Iraq	OIF	2003	Combat	23-Mar-03	Souda Bay, Greece
84	31	10-Sep-03	19-Nov-03	PACOM	East Timor	East Timor	2003	HAO	29-Oct-03	Darwin, Australia
85	22	18-Feb-04	14-Sep-04	CENTCOM	Iraq	OIF	2004	Combat	24-Mar-04	
86	24	7-Jun-04	31-Mar-05	CENTCOM	Iraq	OIF	2004	Combat	7-Jul-04	Norfolk
87	15	6-Dec-04	5-Jun-05	PACOM	Other	Operation United Assistance	2005	HAO	28-Dec-04	Guam/Australia
88	26	25-Mar-05	27-Sep-05	CENTCOM	Iraq	Sea Horse	2005	Combat	30-Jun-05	Manama, Bahrain
89	24	5-Jun-06		EUCOM	Other	Lebanon	2006	NEO	14-Jul-06	Aqaba, Jordan
90	31	11-Nov-04	20-May-05	PACOM	Other	Operation United Assistance, Indonesia	2005	HAO	31-Dec-04	Arabian Gulf (ESX), Japan (FTM)

Table 11. MEU Deployments (1990-2005), Part B

Index	MEB / MEU	Orders			Time/Distance Calc			Seabase Statistics				Op Stats			
		Verbal Orders (date)	Alert / Warning Order (date)	EXORD / DEPORD (date)	Arrival (date)	Dist. to Sit. (nm)	Time to Sit. (days)	Move Ashore (date)	What Went Ashore	Size	How Moved Ashore	No. Persl Ashore	Tons Moved	Pers Evac / Proccs	Op Ended (date)
1	24				Didn't arrive	0			Didn't go ashore	n/a	Didn't go ashore			13-Feb-90	0
2	22			24-May-90	3-Jun-90	2980	10	4-Aug-90	FCE, RADBN Det, H Co/E/Co BLT	Modest	Helo, sur-face craft	~400		21-Aug-90	79
3	13	23-Jan-91			17-Jan-91		5		CE, elements of a Marine Co.	Modest	Helo	~200		27-Jan-91	10
4	13				25-Feb-91		1		CE, rifle co, MSSG	Modest	Helo	300+		3-Mar-91	6
5	26				16-Aug-90	4030	9	21-Aug-90	Reinforced company (200+ Marines)	Modest	Helo	200+	180	9-Jan-91	146
6	4th MEB			10-Aug-90	16-Sep-90		37		Unknown	Unknown	Unknown			10-Nov-90	55
7	4th MEB	3-Jan-91			6-Jan-91	1380	1	5-Jan-91	Security element	Small	Helo	~60	281	11-Jan-91	5
8	11				4-Jun-91		2		Unknown	Unk	Unknown	4000+		16-Jun-91	12
9	5th MEB				24-Feb-91	12000	43		RLT	Large	Helo, sur-face craft			7-May-91	72
10	5th MEB		8-May-91	11-May-91	15-May-91		4	17-May-91	Small working parties	Small	Helo, sur-face craft	~50-100	7,000	29-May-91	14
11	24		9-Apr-91		13-Apr-91	1400	3	15-Apr-91	Helicopters (13), E Co, BLT 2/8, MSSG-24, Combat Engineers	Large	Helo, sur-face craft	~2200+	502	15-Jul-91	93
12	15				18-Jun-91	1280	2		D Co, BLT 1/9 ashore at Cebu; BLT 1/9 (-) ashore at Subic (500 Marines), aircraft (CH-46, CH-53)	Large	Helo	~1000	2,500	26-Jun-91	8
13	22				20-Jan-92		0		BLT 1/8, medical personnel	Large	Helo, sur-face craft	~850	1,130	28-Jan-92	8
14	24		8-Apr-92		10-Apr-92	300	2		CH-53, HST, and LFSP	Small	Helo	~30	400	30-Apr-92	20

Index	Orders			Time/Distance Calc				Seabase Statistics					Op Stats			
	MEB / MEU	Verbal Orders (date)	Alert / Warning Order (date)	EXORD / DEPORD (date)	Arrival (date)	Dist. to Sit. (nm)	Time to Sit. (days)	Move Ashore (date)	What Went Ashore	Size	How Moved Ashore	No. Persl Ashore	Tons Moved	Pers Evac / Proces s	Op Ended (date)	# Op Days
15	11			11-Sep-92	17-Sep-92	1880	6	20-Sep-92	Small teams (5-man CLT; 6-man MST; 5-man CCT)	Small	Helo	~16		500	30-Sep-92	13
16	15	-	25-Nov-92	26-Nov-92	2-Dec-92	2888	7	12/9/1992	BLT 2/9 &HMM164	Large	Helo, surface craft	900+	2,600		28-Jan-93	57
17	22		1-Nov-92		3-Nov-92	3500	1		FCE	Small	Unknown				4-Nov-92	1
18	24	-	-	-	22-Mar-93	7800	26	22-Mar-93	BLT1/2 & HMM 263	Large	Helo, surface craft	900+	42		18-Apr-93	27
19	26				10-Apr-93		0		Didn't go ashore	n/a	Didn't go ashore				17-Aug-93	129
20	22				18-Oct-93	3500	8		Unknown	Unknown	Unknown				10-Nov-93	23
21	22			9-Sep-93	12-Sep-93		0		Didn't go ashore	n/a	Didn't go ashore				16-Sep-93	4
22	13	-	-	7-Oct-93	18-Oct-93	3625	0	12/3/1993	CE ashore; QRF afloat followed MEDCAP, DENCAP, engineering, and security elements ashore	Modest	Helo	~80-160	7		2-Feb-94	107
23	24	-	-	-	1-Feb-94	7800	26	12-Feb-94	Tango Battery, 5/10	Modest	Helo, surface craft				25-Mar-94	52
24	24				27-May-94		1		XO, FCE	Small	Unknown				28-May-94	1
25	26	-	19-Jun-94	24-Jun-94	6-Jul-94	3150	11	-	FCE	Small	Helo	~10			22-Jul-94	16
26	15	27-Jul-94		29-Jul-94	30-Jul-94	480	1	30-Jul-94	3 CH-53 plane detachment	Modest	Helo, KC-130				14-Aug-94	15
27	15	24-Aug-94			7-Sep-94	2070	6		MEU liaison team; security element (escort)	Modest	Helo, surface craft	Unclear			15-Sep-94	8
28	15	7-Oct-94	19-Oct-94		9-Oct-94	410	1	10-Oct-94	MLT and NEO site survey team, airborne assault an live fire	Large	Helo, surface craft	800+			19-Oct-94	10
29	22			23-Nov-94	28-Nov-94	1000	5		Didn't go ashore	n/a	Didn't go ashore				11-Jan-95	44

Index	MEB / MEU	Orders		Time/Distance Calc			Seabase Statistics				Op Stats					
		Verbal Orders (date)	Alert / Warning Order (date)	EXORD / DEPORD (date)	Arrival (date)	Dist. to Sit. (nm)	Time to Sit. (days)	Move Ashore (date)	What Went Ashore	Size	Moved Ashore	No. Persl Ashore	Tons Moved	Pers Evac / Proces s	Op Ended (date)	# Op Days
30	22				30-Jan-95	0			Didn't go ashore	n/a	Didn't go ashore				8-Feb-95	9
31	13				7-Feb-95	540	2	27-Feb-95	MEU	Large	Helo, surface craft				2-Mar-95	23
32	24				29-May-95	0			TRAP	Small	Helo				18-Jun-95	20
33	26				21-Nov-95	1			Didn't go ashore	n/a	Didn't go ashore				29-Jan-96	61
34	26			31-Jan-96	3-Feb-96	3			Didn't go ashore	n/a	Didn't go ashore				7-Feb-96	4
35	15				27-Dec-95	1			VBSS	Small	Helo, surface craft					1
36	22			11-Apr-96	20-Apr-96	4000	9	15-Aug-96	Forward Liaison Cell (5), platoon guides (4), F Co, BLT 2/2 (200+ Marines), Joint CE (50)	Modest	Helo		309		27-Jun-96	68
37	22		20-May-96	20-May-96	21-May-96	0	1		Liaison element (7), security element (18), evacuation element (7), augmentation force (25)	Small	Helo, KC-130		448		31-May-96	10
38	13				3-Sep-96	2			Didn't go ashore	n/a	Didn't go ashore				6-Sep-96	3
39	24				9-Aug-96	0			Didn't go ashore	n/a	Didn't go ashore				11-Aug	2
40	26		6-Mar-97	14-Mar-97	14-Mar-97	405	1	13-Mar-97	FCE, security element (C Co, BLT 1/8), Command element B Co, BLT 1/8, and A Co, BLT 1/8	Large	Helo		688		22-Mar-97	8
41	26			22-Mar-97	2-Apr-97	5190	11	7-Apr-97	Modest		Helo				3-May-97	31
42	15				11-Jul-97	0			AV-8B sorties	Small	Didn't go ashore				18-Jul-97	3
43	22			27-May-97	28-May-97	0	0		Unknown	Unknown	Unknown		2,500		6-Jun-97	9

Index	MEB / MEU	Verbal Orders (date)	Orders	Time/Distance Calc				Seabase Statistics					Op Stats			
			Alert / Warning Order (date)	EXORD / DEPORD (date)	Arrival (date)	Dist. to Sit. (nm)	Time to Sit. (days)	Move Ashore (date)	What Went Ashore	Size	How Moved Ashore	No. Persl Ashore	Tons Moved	Pers Evac / Processes	Op Ended (date)	# Op Days
44	13						0		Unknown	Unknown	Unknown				19-Nov-97	16
45	13				2-Dec-97		0		AV-8B sorties	n/a	Didn't go ashore	Aircrew			2-Jan-98	31
46	11		7-Feb-98	22-Mar-98	12,000	43			AV-8B Det	Small	Helo	Aircrew			11-Apr-98	20
47	11	3-Jun-98		8-Jun-98	890	2			FCE, security unit	Modest	Helo, KC-130		172		20-Jun-98	12
48	26			14-Jun-98		2			AV-8B/KC-130 sorties	n/a	Didn't go ashore				6-Jul-98	22
49	15		4-Nov-98	12-Nov-98	1030	8			MSALT	Small	Helo	~40			18-Nov-98	6
50	15			25-Sep-98		0			AV-8B sorties	n/a	Didn't go ashore	Aircrew			5-Oct-98	10
51	22		14-Aug-98	16-Aug-98		2			Marine Company, SEALs	Modest	Helo	~200			21-Aug-98	5
52	31		7-Nov-98	10-Nov-98	3-Dec-98	6,000	23	3-Dec-98	MEU	Large	Helo, surface craft	~2000	88		25-Dec-98	22
53	13		15-Jan-99	25-Jan-99	3100	0			MSALT	Modest	Helo				4-Feb-99	10
54	13			26-Jan-99	3585	8			MSSG, medical, dental, engineers	Modest	Helo, surface craft		1,400		5-Feb-99	10
55	26			28-Apr-99		0		29-Apr-99	37-man enabling force followed by second security force a separate location	Small	Helo	74+			4-Jun-99	37
56	26		9-Jun-99	9-Jun-99	740	5		10-Jun-99	MEU	Large	Helo, surface craft	2000+			14-Jul-99	35
57	26			22-Aug-99	1550	4		25-Aug-99	FCE (istanbul), CMOC, MSSC Det, medical, dental, working parties	Large	Helo, surface craft	552+			9-Sep-99	18
58	31		30-Sep-99	4-Oct-99	6-Oct-99	2,140	5	6-Oct-99	CH-53 detachment and some CSS personnel	Small	Helo	<80	200		25-Oct-99	19
59	15			21-Feb-00	430	2			MSSG-15 construction	Modest	Helo				1-Mar-00	9

Index	MEB / MEU	Orders		Time/Distance Calc			Seabase Statistics				Op Stats				
		Verbal Orders (date)	Alert / Warning Order (date)	EXORD / DEPORD (date)	Arrival (date)	Dist. to Sit. (nm)	Time to Sit. (days)	Move Ashore (date)	What Went Ashore	Size	How Moved Ashore	No. Pers Ashore	Tons Moved	Evac / Processes	Op Ended (date)
60	24				19-Mar-00	1740	4		MEU	Large	Helo, surface craft	2000+		15-Jun-00	88
61	26				11-Oct-00		1		FCE	Small	Helo, KC-130			16-Oct-00	5
62	13				9-Sep-00	430	1	14-Sep-00	Advance party, HET, MSSG, medical and dental staff	Modest	Helo, surface craft	9	629	16-Sep-00	7
63	31	n/a	n/a	n/a	29-Oct-00	430	1		Unknown	Unknown	Unknown			10-Nov-00	12
64	22				20-Dec-00		0		Didn't go ashore	n/a	Didn't go ashore			20-Dec-00	1
65	11				9-Apr-01	430	0	9-Apr-01	Unclear	Modest	Helo, surface craft	179	1,150	12-Apr-01	3
66	15				15-Sep-01	430	1	15-Sep-01	MSSG, medical, dental personnel	Modest	Helo, surface craft	~361	155	17-Sep-01	2
67	15				28-Sep-01		1	October/November	MEU; FCE to Islamabad	Large	Helo, surface craft	~1900		31-Dec-01	94
68	26			11-Nov-01	23-Nov-01	3550	12	23-Nov-01	Security element to U.S. Embassy (rifle company), Kabul; MEU ashore at Chur	Large	Helo, surface craft	~1900		19-Feb-02	88
69	13				2-Feb-02	3980	9	3-Feb-02	MSSG, medical, dental	Modest	Helo, surface craft	255+	2,960	27-Mar-02	53
70	13			3-Mar-02	4-Mar-02	220	0	4-Mar-02	2 CH-53 (refuelers), KC-130 (refuelers), and 5 AH-1 helicopters	Modest	Helo			3-Apr-02	30
71	22				28-May-02		0		FCE, security element (26 Marines), engineers	Small	Helo	~8		12-Jul-02	45
72	11				4-Jun-02		0	4-Jun-02	FCE, 36-men security element, and 4 CH-53	Small	Helo	~20-100		27-Oct-02	145
73	11				24-Sep-02				Unknown	Small	Unknown	<20			1

Index	MEB / MEU	Verbal Orders (date)	Orders		Time/Distance Calc			Move Ashore (date)	What Went Ashore	Seabase Statistics				Op Stats		
			Alert / Warning Order (date)	EXORD / DEPORD (date)	Arrival (date)	Dist. to Sit. (nm)	Time to Sit. (days)			Size	How Moved Ashore	No. Persl Ashore	Tons Moved	Pers Evac / Proces s	Op Ended (date)	# Op Days
74	11				17-Nov-02	430	0		MSSG, MED-CAP, DENCAP	Modest	Helo, surface craft	~450	9	1,245	19-Nov-02	2
75	24				16-Sep-02	1800	4		MEU	Large	Helo, surface craft	2000+			13-Oct-02	27
76	24				1-Apr-03	1815	4		MEU	Large	Helo, surface craft	2200+			1-May-03	30
77	31	n/a	n/a	n/a	27-Oct-02	2140	18		Medical, dental, and engineers	Modest	Helo, surface craft	~250-400			2-Nov-02	6
78	15				24-Feb-03		0		MEU	Large	Helo, surface craft	2200+			4-May-03	69
79					24-Feb-03	12000	38	24-Feb-03	MEU elements	Large	Helo	~600			18-May-03	83
80	2nd MEB			9-Jan-03	15-Feb-03	8850	37		MEU elements	Large	Helo, surface craft	1300+			6-May-03	80
81	2nd MEB				16-Jun-03		6		Unknown	Unknown	Unknown				19-Jun-03	3
82	26				1-Aug-03		7		Unknown	Unknown	Unknown				30-Sep-03	60
83	26	23-Mar-03			25-Mar-03	530	2	11-Apr-03	C Co, BLT 1/8	Modest	Helo	~200			2-May-03	38
84	31	n/a	n/a	n/a	29-Oct-03	2140	0		MSSG, ENG-CAP, MED-CAP, DENCAP	Modest	Helo			2,705	3-Nov-03	5
85	22				3/24/2004			24-Mar-04	MEU	Large	Helo, surface craft	2000+			31-Jul-04	129
86	24			7-Jun-04	7-Jul-04	3348		7-Jul-04	MEU	Large	Helo, surface craft	~2200	1,200		9-Jul-04	2
87	15		28-Dec-04	28-Dec-04	4-Jan-05	3,700	7	8-Jan-05	Personnel and HADR material	Small	Helo, surface craft	~80	702	707	18-Jan-05	14
88	26				30-Jun-05				Unknown	Unknown	Unknown				30-Jul-05	30
89	24		14-Jul-06	15-Jul-06	17-Jul-06	600	3	17-Jul-06	FCE, Aircraft	Small	Helo, surface craft			1,058	19-Aug-06	33
90	31			7-Jan-05	18-Jan-05	3,050	18		Personnel and HADR material	Small	Helo, surface craft	~80	1,070	540	1-Feb-05	14



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