



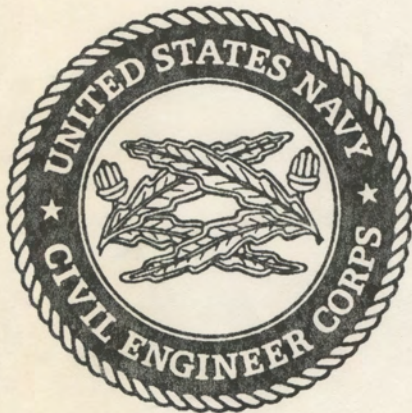
**OPERATION**

**DESERT SHIELD**

**DESERT STORM**

**AFTER-ACTION ASSESSMENT**

**MAY 1991**





DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
WASHINGTON, DC 20350-2000

IN REPLY REFER TO

6 June 1991

*Jay*  
MEMORANDUM FOR CAPTAIN J. B. GREEN, JR., CEC, USN;  
COMMANDER, NAVAL CONSTRUCTION BATTALIONS U.S.  
ATLANTIC FLEET

Subj: DRAFT AFTER-ACTION ASSESSMENT REPORT OF NAVAL CONSTRUCTION  
FORCE (SEABEES) EMPLOYMENT IN OPERATION DESERT SHIELD/  
STORM

Encl: (1) After-Action Assessment Team

1. Forwarded as enclosure (1) is a draft copy of the subject report, for your personal preview. Copies have also been provided to Rear Admirals Bottorff, Buffington, Riffey, and Rosser, and Captains Elkins and Dempsey. Further distribution is not being made until after the principles have had a chance to look it over. I would appreciate your comments by 5 July 1991.

A handwritten signature in black ink, appearing to read "P. W. Drennon", is located above the typed name.

P. W. DRENNON  
RADM, CEC, USN  
Director, Shore  
Activities Division

NAVAL CONSTRUCTION FORCE (NCF)  
(CIVIL ENGINEER CORPS/SEABEES)

OPERATION  
DESERT SHIELD  
DESERT STORM

AFTER-ACTION ASSESSMENT

PREPARED BY:  
OPNAV ASSESSMENT TEAM

APRIL 1991

## TABLE OF CONTENTS

### ITEM NUMBER

- 1 I. EXECUTIVE SUMMARY
- 2 II. NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY
- 3 - Force Utilization
- 4 - NCF/USMC Terms of Reference (TOR)
- 5 MEF Taskings and Interfaces
- 6 NCF/MEF Doctrine Development
- 7 - Force Deployment
- 8 Mobility (Intra-Theater)
- 9 - Effects of Hostilities
- 10 - Military (Defensive) Capabilities
- 11 Small Arms/Ammunition Compatibility
- 12 - Projected Operational Environment (POE)  
and Required Operational Capabilities  
(ROC)
- 13 - Table of Allowance (TOA) Issues
- 14 Equipment (CESE)
- 15 ISO Container Handling Equipment
- 16 Non-CESE TOA
- 17 Computer Sustainability
- 18 Communications
- 19 - Water Well Drilling
- 20 - Main Supply Route (MSR) Construction  
and Maintenance

**ITEM  
NUMBER**

**III. FORCE STRUCTURE**

- 19 - Regimental Command Element
- 20 - Naval Construction Force Support Unit  
(NCFSU) Utilization
- 21 Line Haul Transportation
- 22 - Active Battalion Augments

**IV. TROOP ISSUES**

- 23 - Uniforms
- 24 - Weapons and "782" Gear
- 25 - Tactical Infantry Training
- 26 - Clothing
- 27 - Chemical, Biological and Radiological  
(CBR) Outfitting

**V. RESERVE AFFAIRS**

- 28 - Reserve Force Utilization
- 29 - Ombudsman Program
- 30 - Training
- 31 - Recall Issues
- 32 Voluntary Recall
- 33 - Official Information
- 34 - Post Office
- 35 - Disbursing
- 36 - Military Pay
- 37 - Personnel Records

**ITEM  
NUMBER**

**VI. LOGISTICS**

- 38 - CESE Repair Parts Support
- 39 - Repair Parts Stockage
- 40 - Contracting Authority of NMCBs
- 41 - NCF Supply Procedures
- 42 - NCF Utilization of the Marine Supply System
- 43 - Resupply Time
- 44 - MEF Class IV/MLO
- 45 - Operating the MEF Class IV/MLO

**VII. NAVCENT SUPPORT**

- 46 - Naval Logistics Support Force (NAVLOGSUPFOR) Overview
- 47 - Fleet Hospital Support
- 48 - Engineer Staff Augment (CEC/SEABEE)
- 49 - Forward Logistic Support Sites (FLSS) Staffing

**VIII. CINCCENT INTERFACE**

- 50 - Overview
- 51 - Host Nation Support
- 52 - Contract Construction Agent (CCA) Interface
- 53 - CEC/Seabee Community Visibility in CINCCENT Activities

**XI. APPENDIX**

- 54-70 A through Q

EXECUTIVE SUMMARY<sup>1</sup>

Operation Desert Shield/Desert Storm<sup>2</sup> presented the Civil Engineer Corps, Seabee community and the Naval Construction Force (NCF)<sup>3</sup> its most dramatic opportunity for achievement since the Vietnam conflict.

Within the operational theater of Commander, U.S. Forces, Central Command, the Seabees and Civil Engineer Corps provided construction support to the First Marine Expeditionary Force (I MEF) and the Commander, Naval Forces, U.S. Central Command. By all accounts, Naval Construction Force involvement in Operation Desert Shield and Desert Storm was an unqualified success. The NCF's contributions were significant, having a direct bearing on combat force capabilities, the ability of the MEF to execute tactical maneuvers of deception, and overall fighting force sustainability.

Naval Construction Force units attached to the MEF compiled "Amazing Construction Statistics"<sup>4</sup> while supporting the fighting forces. The most combat-significant taskings were horizontal construction requirements. These were demanding, frequently requiring continuous 24-hour a day operations. Highlights in this chapter of Seabee history include:

- o Four airfields for C-130s; numerous rotary wing landing pads and airfields; 7 million square feet of airfield aprons; and a landing strip for RPVs (intelligence gathering remotely piloted vehicles)
- o 200 miles of 4-lane expeditionary roads used as main supply routes (MSRs), essential for MEF mobility (90,000 men with armor and equipment);
- o Ammunition supply points (12 million square feet); and
- o Extensive defensive fortifications and dug-in positions in support of the 1st and 2nd

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<sup>1</sup> See Appendix A (54), OPNAV Seabee Assessment Team Tasking Letter.

<sup>2</sup> See Appendix B (54), Significant Events Chronology.

<sup>3</sup> See Appendix Q (70), Table of Acronyms.

<sup>4</sup> See Appendix C (56), Amazing Construction Statistics.

Marine Divisions, and I MEF Commanding General, involving an estimated 80 miles of earthworks and berms.

While the MEF's horizontal taskings to the Seabees were significant, its vertical taskings played to the Seabees special skill and uniquely distinguished the NCF's capabilities from those of the USMC's combat engineers and engineer support battalions. Significant vertical taskings included: 20 aircraft maintenance hangars with concrete decks; 14 galleys serving 75,000-men; and troop beddown areas (10 camps with 42,500-man capacity).

An especially important requirement was for Naval Construction Force mobility. The NCF was tasked with providing support for an offensive, forward-moving MEF. This resulted in heavy use of remote detachments located as many as 200 miles from base camps. Base camps themselves were required to be moved on at least six occasions.

A pleasant development in the view of senior commanders and Force planners was the utilization and capable performance of the mobilized Reserve units. Two thousand eight-hundred and fifty (2,850) Seabee reservists were recalled to active duty<sup>5</sup>. Reserve units comprised 38% of in-theater NCF resources and at the time of peak operations, represented 50% of deployed NCF assets.

NOT TRUE

The percentage of reservists who reported for duty upon recall, a long speculated figure, turned out to be in excess of 97%<sup>6</sup>. Except for minor administrative differences, reserve units in the field could not be distinguished from active duty counterparts.

7

In addition to direct support of the MEF, Seabees:

NOT TRUE

- o Helped stand up three Fleet Hospitals and provided all related public works support;
- o Provided engineer staff support to both CINCCENT and an expanded NAVCENT staff;
- o Provided critical public works support at Naval Station Subic Bay, a strategically important supply point, during a period of local labor unrest;
- o Continued support of high-priority CINC

<sup>5</sup> See Appendix O (68), Seabee Reserves Recalled to Active Duty.

<sup>6</sup> Official COMNSVRESFOR statistics indicate 97.5%, the highest of all Naval Reserve Programs.



construction projects in both the Atlantic and Pacific areas of responsibility (AORs).

EUROPE

- o Displayed an effective "one Navy" concept in the combined active/reserve 3rd Naval Construction Regiment stand-up.

History will decide, but perhaps the most telling use of the Seabees by the MEF, underscoring the extent of its confidence in NCF capabilities, was the formation of two 200-man "heavy detts" to move forward with the 1st and 2nd Marine Divisions as they advanced through the breaches in enemy fortifications toward Kuwait City at the onset of the ground war. The Marines had anticipated heavy casualties during the breaching operation. Seabees were to follow immediately behind the MEF's combat engineers and engineer support battalions, fleeing up to fill losses as required and, once in Kuwait City, to construct fortified bunkers for the CG, I MEF, and ensure air access by rapidly repairing anticipated runway damage at Al Jaber airport.

CLASSIFIED!

At the margins of this success story, however, NCF planners must evaluate without prejudice several issues of NCF capability and sustainability which, had combat operations continued, would likely have adversely affected performance in the field. These include:

- o Equipment capability and sustainability<sup>7</sup>. Heavy horizontal tasking can be expected in future MEF-aligned operations. Increased horizontal capability, improved equipment management and maintenance, and more rapid repair parts support need to be evaluated.
- o Water well drilling<sup>8</sup>. Despite valiant attempts by two teams made up from three NMCBs, water well drilling was unsuccessful. Existing agreements with the Marine Corps call for Seabees to provide the Corps total well drilling capability. The NCF must strengthen its capability in this vital area.
- o Communications<sup>9</sup>. Communications equipment in the present Table of Allowance (TOA) needs to be upgraded. Marine units provided considerable communication equipment and training after NMCBs arrived in theater.

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<sup>7</sup> For details refer to items 12, 18, 38, and 39.

<sup>8</sup> For details refer to item 17.

<sup>9</sup> For details refer to item 16.

- o Uniforms<sup>10</sup>. The Seabee utility green uniform has been worn with pride and distinction for over 30 years. Being distinctive, however, is not to the NCF's advantage in a battle area where the only other forces wearing a similar uniform are enemy. The NCF's most valuable asset is its men, and these men were vulnerable to mistaken identity. Force planners must be prepared to adopt the common U.S. Forces' uniform in future conflict areas.
- o Host nation contractor support<sup>11</sup>. Despite its potential appeal as a force multiplier, host nation contractor support failed in the face of hostilities. Force planners need to assess realistically the risks of relying too heavily on civilian contractors and labor under battle conditions.
- o NCF/USMC compatibility<sup>12</sup>. Significant differences exist between NCF and USMC policies regarding the outfitting of troops and units that must operate together in the field. The differences were not "show stoppers", but caused significant inefficiencies. The extent of these differences, from construction equipment to troop clothing, from radios to weapons and ammunition, evidenced a lack of coordinated, high-level force planning. Increased emphasis needs to be given to combined force doctrinal deployment.

In conclusion, another legendary chapter has been written in Seabee history. The leaders and men in the field can be justly proud of their accomplishments. Force planners and logisticians who labored for many years to organize, equip and train an effective Naval contingency construction capability have succeeded in both the active duty and reserve arenas. The Reserve Force proved itself to be a usable and valued resource, capable of sustained performance alongside active counterparts.

As "lessons learned" are prepared and debated, deficiencies will undoubtedly be identified and corrected to strengthen the CEC/Seabee construction force and its capabilities to serve the

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<sup>10</sup> For details refer to item 23.

<sup>11</sup> For details refer to item 51.

<sup>12</sup> For details refer to item 3, 5, 10, and 16.

needs of the Navy and the Marine Corps. At the conclusion of this war, however, the overall assessment is clear: the Naval Construction Force met the needs of the Navy and the Marine Corps, and the Reserve community met the needs of the Force.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB-CATEGORY: FORCE UTILIZATION

PROBLEM/ISSUE/LESSON: NCF utilization in Operation Desert Shield/Storm, as tasked by the Marine Expeditionary Force (MEF), was significantly different than NCF Vietnam and peacetime deployments. While the overall operation was a stunning success, tasking revealed some marginal weaknesses in Force capabilities in the areas of sustained heavy horizontal construction, NCF unit mobility, well drilling, communications and equipment sustainability.

DISCUSSION: For the record, the most "combat-significant" taskings of the NCF were horizontal. These were: airfields, both fixed and rotary wing (4 runways, 7 million square feet of aprons); main supply routes (200 miles of 4-lane expeditionary roads); ammunition supply points (12 million square feet, involving 1.6 million cubic yards of fill); and defensive fortifications (miles of earthwork berms and dug-in positions).

The most significant vertical taskings were: aircraft maintenance hangars with concrete decks (25); medical facilities (4 hospitals, 3,200 beds); galleys (14 with 75,000 man capacity); and troop beddown areas (10 camps with 42,500 man capacity). A total of 55,000 cubic yards of concrete was placed.

The most significant unexpected requirement was for mobility. The NCF was tasked with providing support for a "maneuvering" MEF, resulting in remote dets 200 miles from base camps and six base camp relocations.

One of the more unique taskings was the "echeloning" of CB heavy dets of 200 men each behind USMC combat engineers and engineer support battalions as the 1st and 2nd Marine Divisions forced breaches in enemy fortifications and moved into Kuwait. USMC doctrine suggests a 50% casualty rate for combat engineers during breaching operations, requiring replacement form engineer support battalions, which in turn would draw upon Seabees as needed. *classified*

The most significant failure was in water well drilling. Other weaknesses were in communications and equipment sustainability under the intensive operations tempo. None of these areas adversely affected this campaign, but could have, had the war continued.

RECOMMENDATIONS: Future planning, outfitting, and training of the NCF must emphasize the ability to support the above mentioned MEF taskings. Basic planning assumptions, TOAs and training programs need to be reviewed and redefined as necessary to place proper emphasis on heavy horizontal construction capability, NCF ground mobility, and equipment sustainability. Corrective actions are required in water well drilling and communications.

**CATEGORY:** NAVAL CONSTRUCTION FORCE (NCF) CAPABILITIES

**SUB CATEGORY:** NCF/USMC TERMS OF REFERENCE (TOR)

**ISSUE:** The current (1988) NCF/USMC TOR was generally followed during Operation Desert Storm. As a result of the Operation, however, several areas need to be addressed in future updates.

**DISCUSSION:** For compatibility purposes it is essential that new communications, CBR and weapons procurement be coordinated. Repair parts resupply for common items, and ammunition need to be as closely aligned as possible. Navy should participate in new Marine Corps equipment procurement buys.

It was evident the Seabees were more knowledgeable of Marine operations than the Marines were of Seabees operations. This level of knowledge can be increased by publication of the NWP 22-9/FMF 13-4 and development of a joint NCF/Marine exercise participation plan.

Movement programming responsibilities (TPFDD) for employing NCF units in a support of a Marine Air-Ground Task Force (MAGTF) need to be defined. USMC responsibility is recommended for this action.

There is a need to eliminate future confusion over Seabee "combat engineer" employment by explicitly enumerating within the TOR those combat engineer tasks which Seabee units are neither trained nor equipped to perform, and therefore should not be assigned.

As technical experts in engineering and facilities design and construction, NCF units attached to a MAGTF are well equipped to provide facilities engineering, design planning and estimating services as required. These engineering services should also be made more explicit in future TOR updates.

**RECOMMENDATION:** Update the 1988 NCF/USMC Terms of Reference in accordance with the above discussions.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB CATEGORY: NCF/USMC TERMS OF REFERENCE (TOR)

MEF TASKINGS & INTERFACES

BACKGROUND: The NCF operational commander, 3RD Naval Construction Regiment (NCR), reported to the Commanding General, I MEF. Day to day interface and project tasking was exercised through the G-4 (MEF Engineer) staff. A CEC officer (LCDR) was assigned to the MEF/G-4 staff primarily to interface with MARCENT and CENTCOM on approval of MEF projects. Another CEC officer, and 3RD NCR staff officer (LCDR/CEC), was assigned to work with the MEF/G-4 staff and serve as a liaison officer, primarily to focus on MEF tasking of the NCR.

The MEF Engineer staff, with some assistance from the Regimental Operations Staff, developed general project tasking (conceptual in scope, i.e., "build 5000 man galley"). Regimental operations staff personnel, with assistance of the battalion to be given the tasking, developed the design, and bill of materials for the conceptual tasks and submitted same to the MEF. Upon approval of the project (either by the MEF, or CENTCOM, depending upon the dollar value and source of funds), the project would be formally tasked to an NCF unit with authority to initiate procurement of materials. Subcontractor support would also be identified. Fragmentation orders and tasking letters served as tasking documents.

EVALUATION: Process worked well. Only problem identified was with situationally unique management procedures for use of foreign government funds. These are discussed in the CINCENT Interface section of this report.

RECOMMENDATION: None. The 3RD NCR did an outstanding job in providing clear and valid tasking for employment of NCF units.

CONTACTS: IMEF (G-4), 3RD NCR.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CABILITIES

SUB CATEGORY: NCF/USMC TERMS OF REFERENCE (TOR)

NCF/MEF DOCTRINE DEVELOPMENT

PROBLEM/ISSUE/LESSON: Significant differences exist between MEF and NCF policies regarding the outfitting of troops and units that must operate together in the field, causing inefficiencies in joint operations and reduced effectiveness of mutual supporting roles.

DISCUSSION: Important areas of the NCF's assets are different from those used by a MEF and the USMC, while the purpose of these assets is either identical or very similar. For example, the MEF and the NCF both utilize crew served weapons, M16s, side arms, CBR gear, uniforms, radio and wire communications equipment, etc., but in most instances the NCF equipment is a different type or model, has a different manufacturer, and may require different training and logistic support. Other significant areas of incompatibility, as noted elsewhere in this report, extend to construction equipment, off-road vehicles, potable water transport and distribution systems. The vast array of differences evidence a lack of coordinated, high-level joint force planning.

RECOMMENDATION: As a critical element of joint force capability and sustainability, NCF outfitting should be more closely aligned with the MEF and USMC doctrine. Deliberate steps should be taken at the OPNAV (OP-44) level to establish systematic MEF/NCF doctrine development, with particular focus on outfitting policies.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB CATEGORY: FORCE DEPLOYMENT

PROBLEM/ISSUE/LESSON: Early deployment of NCF assets into theater was hindered by intense competition for both air and sea lift. The CINC's priorities (bulldozers competing with tanks for lift) of "war-fighting" hardware first, left little space for construction assets. However, through the effort of the operational Commander, I MEF, four battalion air detachments were deployed early in the contingency to provide limited construction capability in theater. These air detachments proved to be a valuable rapid deployment option and were easily scheduled by U.S. transportation command. The air echelons, everything within a battalion allowance that is air transportable, minus the air detachment TOA, were never a contender for air movement due to the limited lift available and the CINC's "war fighters first" priorities. Sea echelon equipment was a sealift contender only.

DISCUSSION: Several options have long been recognized by planners to speed-up the deployment of Naval Construction Force equipment. These include: pre-positioning in theater, obtaining space aboard maritime pre-positioning ships (MPS), or a preloaded NCF controlled barge which could be towed to a contingency location relatively quickly. Each option has its advantages and disadvantages:

MARITIME PREPOSITIONING SHIPS (MPS): Rapidly available to a contingency location, but space is limited and highly valued by the war-fighters. Access to cargo in a non-conflict scenario (natural disaster) could not be guaranteed.

PRE-POSITIONING: Traditionally problems with this option include: locating an appropriate site; locate (right place for which contingency); determining what equipment to preposition; and finding a proponent who will accept the responsibility for custody, storage and maintenance.

EQUIPMENT BARGE: Barges could be pre-loaded with containers and equipment in quantity and assortment deemed most advantageous. Equipment could be accessible for maintenance by Seabee personnel and barge could function as repair and staging area after unloading.

RECOMMENDATION: In light of Operation Desert Storm deployment experiences, NCF planners need to evaluate:

- (1) Air echelon requirement: Desert Storm should not be considered as the "standard" for air transportable equipment. Combat operations were limited, MSRs and port facilities were excellent and the AOR never exceeded more than a few hundred miles in length. The



requirement to rapidly move equipment within theater by air transport during hostilities is still valid; as is the movement of the battalion by air in a more limited contingency or natural disaster where air lift would not be as constrained as during the initial stages of operation Desert Shield.

- (2) Prepositioning of NCF assets: an NCF policy and long-range plan which weighs the merits of pre-positioning; MPS shipping; exercise participation and the utilization of exercise money to facilitate pre-positioning; barge options, costs and benefits and overall Seabee contingency support should be developed and supported by all NCF commands.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB CATEGORY: FORCE DEPLOYMENT

MOBILITY (INTRA-THEATER)

PROBLEM/ISSUE/LESSON: NCF units were required to frequently move and deploy construction detachments to remote locations.

DISCUSSION: Tasking for the NMCBs changed quickly as the war commenced. War fighters changed from a war staging preparation mode, to an offensive execution mode. In the process, NMCBs and their various detachments were shifted and commenced construction of forward main supply routes (MSRs) and ammunition supply points (ASPs).

Host nation support (transportation) was curtailed or non-existent as workers fled the danger areas, placing additional tasking on the NMCBs organic assets for movement of men and equipment.

RECOMMENDATION: NCF capabilities in unit mobility must be maintained. Host nation support must be considered a force multiplier; not a substitute for organic resources/capabilities.

CONTACT: NMCBS 5, 24, 74

Too Weak

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB-CATEGORY: EFFECTS OF HOSTILITIES

PROBLEM/ISSUE/LESSON: The most significant effects of hostilities were: the disappearance of host nation contractor support, and the forward shift in NCF utilization.

DISCUSSION: Before hostilities broke out and prior to the air war (17 January in-country), the NCF's regimental command element relied, in part, on host nation contractor support for line-haul transportation, supply of building materials (lumber, concrete, repair parts, etc.), and in a few instances, contract construction.

The beginning of hostilities significantly diminished host nation contractor support. The air war lasted 42 days. In its second week, some rear-area contractor support revived, but finding contractors willing to go North of Jubayl (located about 200 kilometers south of the Kuwait border) in support of the front was problematic. Contractor support across the board further diminished once the beginning of the ground war appeared likely (after 20 February).

The onset of hostilities also changed significantly the posture of the MEF, its priorities, and its NCF support requirements. Top priorities shifted to MSRs (4-lane main supply routes) to enable the entire MEF to shift to the west and forward; ASPs (ammo supply points); MEF/HQ camp/bunkers; troop beddown areas and defensive earthworks; fuel farms; expeditionary airfields for C-130s and RPVs (remotely piloted vehicles); rotary wing airfields; and water wells (travel distances from the sea and water purification units (ROWPUs) were reaching unsupportable limits).

Nineteen Scud missile attacks emphasized need for CBR protection and training, and caused serious focus on shelf-life questions about canisters and suits, but had no significant effects on unit mission. For those Seabees (400 in 2 NCF heavy dets) accompanying the 1st and 2nd Marine divisions on the ground through Iraqi fortifications, the prospect of confronting the utility green uniformed enemy removed all last remaining doubts in the troops' minds about the need for Seabees to be uniformed like the Marines.

RECOMMENDATION: In battle areas, NCF capabilities must be mobile, self-sustaining, and appropriately outfitted to deal with the situations presented. Doctrine must be flexible and responsive.

CATEGORY: NAVAL CONSTRUCTION (NCF) CAPABILITY

SUB CATEGORY: MILITARY (DEFENSIVE) CAPABILITIES

PROBLEM/ISSUE/LESSON: Although not seriously tested, NCF military (defensive) capabilities appear to have been adequate, with some exceptions.

DISCUSSION: There are numerous incompatibility issues between the USMC and the NCF, creating problems. The USMC is tasked with providing ammo for the NCF, for example, USMC and NCF weapons are different, resulting in confusion and difficulties in ammo stockpiling and supply. The USMC uses the M16A2 rifle/ammo; the NCF's M16A1 can not use the higher powered A2 rounds without a dramatic loss of accuracy. The USMC uses the 9mm pistol; the NCF uses the .45 cal. The USMC still uses the 81mm mortar for illumination flares and longer range coverage. The NCF uses only the 60mm mortar. Tactical communications nets used different equipment (see NCF Capability-Communications). The .50 cal. machine gun and AT-4 anti-armor weapons proved valuable and should be retained.

Military training of active NMCBs was considered adequate. Military training of reserve NMCBs, however, requires additional emphasis.

RECOMMENDATION: Establish a study team with charter to review USMC/NCF weapons compatibility issues and develop an integrated mutually supportive and coordinated defensive capability. Specific suggestions: Upgrade NCF to M16A2. Add two 81mm mortars to NMCB TOA. Strengthen reserve NMCB military training (see Item 30. Reserve Affairs-Training).

CONTACTS: 3RD NCR, NMCBS 5, 24, 74.

ITEM 10

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITIES

SUB CATEGORY: MILITARY (DEFENSIVE) CAPABILITIES

SMALL ARMS/AMMUNITION COMPABILITIES

PROBLEM/ISSUE/LESSON: Current doctrine for NCF units is that after the initial 30-day ammunition supply by the Navy, the Marine Corps will then resupply NCF units with Marine Corps ammunition. The incompatibility of ammunition will cause a dramatic decline in accuracy.

DISCUSSION: Weapons currently stored in PWRMS Naval Weapons Support Center, Crane, Indiana for RNMCS are M16A1 Rifles. The ammunition match for this weapon is 5.56mm ball which comes under Navy Ammunition Logistic Code (NALC) A071-10 round clip, A073 linked ball tracer, A066 single ball round, or A068 single tracer round. The ammunition match for the Marine Corps M16A2 weapon is 5.56 round which comes under Marine Ammunition Logistic Center (MALC) M855 ball and M856 tracer. NCF units aligned with Marine Expeditionary Forces (MEF) carry a 30-day supply of ammunition for each man. After expenditure of this initial allocation, ammunition is provided by the Marines Logistics Support System. Thus, Seabees using the M16A1 would then be resupplied with the new ammunition which in the M16A1 rifle results in a dramatic decline in accuracy. Every 100 yards of range results in target divergence of 42 inches. This was verified by Naval Weapons Station Crane Inservice Engineering.

RECOMMENDATION: Seabees should either be assigned M16A2 weapons or carry enough ammunition for the M16A1 for the duration of the conflict. Logistic support for proper ammunition should be provided by Navy or Marine Corps logistics agencies.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB-CATEGORY: PROJECTED OPERATIONAL ENVIRONMENT (POE)  
AND REQUIRED OPERATIONAL CAPABILITIES (ROC)

PROBLEM/ISSUE/LESSON: Evaluation of project taskings assigned to NCF units by, I MEF and COMUSNAVCENT, indicated that the capabilities required of NMCBs by OPNAVINST C3501.115B are more than adequate to meet contingency construction taskings in support of a Marine Expeditionary Force and Forward Logistic Support Site (FLSS).

Although equipment and material availability hindered construction progress on some projects, military and technical skills of employed units were well above those required to perform assigned tasks.

RECOMMENDATION: No action required. Current ROCs & POEs as assigned in OPNAVINST C3501.115B are adequate.

CONTACTS: I MEF, 3 RNCR, NMCBs 5, 24, 74.

CONTACTS: I MEF, 3RD NCR, NMCBS 5, 24, 74.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB-CATEGORY: TABLE OF ALLOWANCE (TOA) ISSUES

EQUIPMENT (CESE)

PROBLEM/ISSUE/LESSON: The mix and size of NCF equipment used in-country did not lend itself to efficient completion of mission taskings in Operation Desert Shield/Storm.

The CAPABILITY of the equipment in country was viewed as insufficient. Both size and quantity of construction equipment were questioned. Attenuating this discussion were the adverse field conditions (mud and sand) and extensive operating hours required to support MEF taskings in horizontal construction. High deadline rates in commercial trucks suggest unreliability.

Lack of sufficient line haul transportation assets caused acute difficulties in unit mobility once host nation support (leased vehicles) vanished in the face of hostilities. For example, graders and scrapers were road-driven more than 200 kilometers to job sites.

Increasing amounts of mission critical CESE were deadlined for lack of repair parts, and inability to swap parts. Procurement practices over the years have resulted in extensive incompatibility among CESE items, even within the same equipment classification code (ECC). The resulting fleet is composed of a plethora of manufacturer's brands (e.g., Fiat, Navistar, Allis). These were not compatible with USMC vehicles, nor were off-brand parts available locally in Saudi Arabia. Commercial (non-tactical) equipment in most cases is not suitable for forward area deployment.

RECOMMENDATIONS: Upgrade CESE/TOA. Establish a broad-based study group, including members of operational units which participated in Operation Desert Shield/Storm, plus CESO, NAVFAC, FLEET EQUIPOS, and RNCF, to review the suits of equipment used in-theater. More broadly, review NMCB CESE/TOA with the mission to develop a more balanced, more capable equipment suit within existing budgetary and mobility constraints.

This review should: ensure a balanced mix of equipment types; improve compatibility with other services, particularly the USMC; develop plans for block procurements, in conjunction with the USMC and other services, to minimize variety of U.S. manufactures within same ECC; and strengthen interservice liaison on equipment planning, RDT&E and acquisition. Emphasis should be placed on outfitting nine TOA's primarily with tactical (military specification) equipment for MEF aligned units.

In addition, a systematic review of all equipment repair orders (EROs) in Operation Desert Shield/Storm should be conducted to identify recurring equipment problems/weaknesses under theater conditions in order to develop fleet-wide corrective actions.

Finally, since differences exist between peacetime and wartime uses of CESE/TOA, consideration should be given to creating a heavy horizontal echelon in the NCFSU, making available in PWRMS a tailored/augment package whenever needed.



CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB CATEGORY: TABLE OF ALLOWANCE (TOA) ISSUES

ISO CONTAINER HANDLING EQUIPMENT

PROBLEM/ISSUE/LESSON: Operation Desert Shield/Storm presented the first wartime test of International Standards Organization (ISO) containers, revealing some weaknesses. The 14-ton crane, intended to be the principal means for moving ISOs, proved unreliable and unworkable under area conditions. The 35-ton crane was used instead to provide lift and limited maneuverability for positioning. Double forks were also used to lift up ISOs, so that trailers could be driven out from under, and then let down the ISOs in place, but afforded no maneuverability. ISOs needed to be moved and repositioned frequently, tying up valuable equipment. The USMC provided equipment to do this job.

NCF units in the future will become increasingly containerized and the NCF must be capable of handling ISOs easily and efficiently. It is not realistic, during wartime operations, to assume that ISOs can be off-loaded, positioned with unerring foresight according to a master camp plan, and then need not be moved again.

RECOMMENDATION: Eliminate the 14-ton crane. Establish a study group to evaluate a range of replacement TOA items which can do the job, including an over-the-road hydraulic boom cranes (20-ton), or container handling attachment for large fork lifts.

In future MEF-supported operations, upgrade the ISO handling capability of the regiment (multiple NMCBs, NCFSU), where the NCFSU could be employed as a rear-area managed asset supporting ISO handling of all NMCBs. The NCFSU should be equipped with a number of USMC container handling devices, the "Rough Terrain Cargo Handler" (RTCH); or some other means of lifting, loading, unloading, and positioning containers.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB CATEGORY: TABLE OF ALLOWANCE (TOA) ISSUES

NON-CESE TOA

PROBLEM/ISSUE/LESSON: The non-CESE Table of Allowance (TOA) was generally adequate to meet the NCF mission tasking during Operation Desert Shield/Storm, but could be improved in selected areas such as Night Observation Devices (NODs).

RECOMMENDATION: Appoint a balanced team to review all lessons learned from these Operations and develop a plan to implement any changes deemed necessary.

Additionally, link by written agreement with the USMC and Navy Comptroller any changes which occur in Marine tactical equipment such as weapons, communications CBR gear, etc. so that procurement actions could be implemented for NCF units simultaneously.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB CATEGORY: TABLE OF ALLOWANCE (TOA) ISSUES

COMPUTER SUSTAINABILITY

PROBLEM/ISSUE/LESSON: NCF computers are commercial models. Excessive hardware failures and wear were experienced during Operation Desert Storm.

DISCUSSION: The computers currently utilized by the NCF are designed for office use as opposed to field operations. Many NCF computers utilized in the field during Desert Shield/Storm were inoperative due to power surges and sand/dirt damage. NCF units must have reliable computer capability. Manual systems are not acceptable in today's automated environment.

Alpha Company operations appear to offer opportunities for dramatic improvement in equipment management if computer software systems are developed to support the various routine management functions.

RECOMMENDATION: NCF computers, repair parts support, and repair capability need to be reviewed and adjusted to achieve adequate sustainability. A cost effective solution is required; battle-hardened computers are not required.

A study group should be convened to evaluate Alpha Company equipment management functions for computer adaptations.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB-CATEGORY: TABLE OF ALLOWANCE (TOA) ISSUES

COMMUNICATIONS

PROBLEM/ISSUE/LESSON: Present NCF/TOA communications equipment did not meet requirements of Operation Desert Shield/Storm. Key shortfalls were solved by borrowing equipment from the USMC.

FIELD OBSERVATIONS: Lack of range and reliability were the most significant problems experienced. Other problems included: incompatibility with USMC radio equipment; limited quantity; inadequate capabilities for malfunction diagnosis and repair (e.g., nothing approaching USMC radio repair vans); awkward outfitting of command and control vehicles for both radio and secure voice (nothing like USMC HMMVs); lack of familiarity with NCF equipment among fleet-trained ET/RM personnel; lack of training in antenna tuning; outmoded switchboards compared to USMC dial-up connections; no bundled wire reels (3-line, 6-line); lack of hand-held radios for non-secure local construction operations. Entire system evidenced lack of integrated planning and coherency.

DISCUSSION: NCF units must communicate externally and internally by a combination of wire and radio means, in both secure and non-secure modes. For internal communications in Operation Desert Shield/Storm, requirements involved elements within base camps covering areas of up to 4 square miles and elements detached at distances of up to 200 miles. External communications involved inter-NCF requirements and those with Marine units in excess of 200 miles.

RECOMMENDATION: A complete overhaul of NCF communications capabilities is required. Establish a small, balanced study group, including Operation Desert Shield/Storm participants and USMC representation, to review top-to-bottom the NCF/Communications TOA and related training programs affecting wire/radio communications with the objective of improving performance/compatibility in this vital area. Consideration should be given to assigning a USMC communicator to each NCF unit during contingency operations.

CONTACTS: OPS & COMM OFFICERS, NMCBs 5, 24, 74.

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB-CATEGORY: WATER WELL DRILLING

PROBLEM/ISSUE/LESSON: Despite two attempts involving teams from 3 NMCBs, the NCF failed to complete a successful water well. NCF performance in this mission area was unsatisfactory, suggesting fundamental weaknesses in NCF training and equipment. The fact that special hydro-geological expertise was offered, and declined, suggests further that the complexity of the task was not recognized. Without improvement, current water producing capabilities are likely to be inadequate to meet a full range of future USMC mission requirements.

DISCUSSION: With hindsight, the task of drilling deep holes and finding water in the Saudi desert is complex and challenging. It requires knowing where to look, involving careful research of hydro-geologic data. It requires skill in dealing with a variety of down-hole problems. It involves careful selection among choices of mud, compressed air, and foam. Standard practices in-country employ "telescoping" of well casings, periodically reducing drill bit sizes and placing of casing. Despite valiant crew efforts, NCF endeavors were unsuccessful.

RECOMMENDATION: Strengthen significantly NCF well drilling capabilities. Establish a team involving outside well drilling professionals to conduct an in-depth evaluation of NCF well drilling capability, training and equipment. Accelerate equipping and training of NMCBs with newly procured well drill equipment.

Identify routine means for acquiring detailed hydro-geological data and expertise, and establish standard procedures for using it. Assign to reserve NCFUSOs an "echelon" mission to develop a second-tier of more specialized expertise in well drilling.

Routinely test NCF water producing capability by expanding well drilling exercises to cover a variety of geologic environments.

CONTACTS: MEF G-4, 3RD NCR, NMCBs 5, 24, 74.

*Don't Agree*

CATEGORY: NAVAL CONSTRUCTION FORCE (NCF) CAPABILITY

SUB CATEGORY: MAIN SUPPLY ROUTE (MSR) CONSTRUCTION AND  
MAINTENANCE

PROBLEM/ISSUE/LESSON: Construction and maintenance methods exhibited on the MSR indicated a knowledge gap in expedient road construction. Windrows were graded to each side of the road and left. No sign of compactors or rollers being used in either the construction or maintenance of the MSR's was evident. Personnel interviewed at the actual work site were given little guidance. It was evident that minimal supervision/direction in road construction techniques was provided.

RECOMMENDATION: Properly train and follow through with supervision on expedient road construction and maintenance. Small unit leadership skills need to be emphasized.

CATEGORY: FORCE STRUCTURE

SUB CATEGORY: REGIMENTAL COMMAND ELEMENT

PROBLEM/ISSUE/LESSON: Organizationally, the accepted war-fighting doctrinal concepts concerning the use of the regimental command element in the MEF were not fully implemented. The NCFSU was not used as a task-oriented regimental asset. Its unique assets (e.g., line-haul transportation equipment and operators) were not mobilized and thus were not available to support multiple NMCBs. Further, certain cross-cutting regimental activities serving the NMCBs in the areas of MLO and equipment management were not implemented in accordance with accepted doctrine.

DISCUSSION: The 3RD Naval Construction Regiment (averaging 2,500 men) performed outstandingly in support of Operation Desert Shield/Storm, proving the NCR organization as constituted, including the regimental command element, worked.

In certain areas, however, a closer alignment with accepted doctrinal concepts concerning the use of the regimental command element probably would have been useful. Mobilization of a task-oriented NCFSU could have provided valuable line-haul transportation assets (134 tractors, 157 trailers), upgraded NCF unit mobility and staffed the MEF class IV yard. A fully staffed regimental equipment department, in conjunction with the R4, might have facilitated cross-NMCB solutions to the growing repair parts availability problem, and improved NCF equipment sustainability.

RECOMMENDATION: The role of the regimental command element in overall force structure needs to be reviewed. Doctrinal concepts of organization and functioning either need to be revised to align more closely with actual requirements, or reaffirmed and implemented in future contingencies.

CONTACTS: I MEF, 3RD NCR, NCMBs 5,24,74,

CATEGORY: FORCE STRUCTURE

ITEM 20

SUB CATEGORY: NAVAL CONSTRUCTION FORCE SUPPORT UNIT (NCFSU)  
UTILIZATION

PROBLEM/ISSUE/LESSON: The capabilities of a NCFSU were required, but not utilized.

DISCUSSION: Approximately 40% of NCFSU -4 was recalled in support of Operation Desert Shield/Storm. Primary tasking was the custody and maintenance of a TA-01 being held in reserve to either replace causality losses or increase battalion capabilities. Upon the departure of NMCB personnel, NCFSU-4 personnel were assigned the task of cleaning, inspecting and preparing for embarkation retrograded battalion equipment and TOA assets.

As a "housekeeping" equipment organization for a regimental headquarters, the NCFSU is capable of accomplishing a variety of tasks which include: line-haul transportation, class IV material yard operation and equipment maintenance. Custody and maintenance of regimental assets such as equipment and TOA assets held in reserve is a legitimate NCFSU task; however, embarkation of either retrograde or forward deploying equipment is not currently required of an NCFSU. If these taskings are envisioned, mission statements should be expanded and technical training provided. Other specialized requirements which would have been of benefit during Operation Desert Storm and fit into the NCFSU concept include: a "heavy" echelon of construction equipment, line-haul transportation, and ISO container handling.

In accordance with its mission statement NCFSU's are pools of technical expertise in several areas. Based on Desert Storm experiences, additional technical expertise is required in the area of water well drilling. Well drilling and geo-hydrology skills could be incorporated into NCFSU mission statements.

The on site leadership of NCFSU-4 was superb; however, SU's are tasked organized and echeloned to satisfy specific taskings. Future Reserve Support Unit recalls should be by echelon with the assigned leadership intact. NCFSUs units should not be considered secondary units or used as BODY POOLS.

SUMMARY: Naval Construction Force Support Units offer a degree of flexibility not normally available to active forces. In retrospect, a rare opportunity to evaluate the capabilities and organizational effectiveness of these units was lost.

RECOMMENDATION: Evaluate the requirement for NCFSU embarkation training (both air and sea). Increase the NCF's well drilling effectiveness by adding technical well drilling "experts" to the NCFSU allowance. Examine ISO container handling as a possible NCFSU mission.

NMCB-1

?



**CATEGORY:** FORCE STRUCTURE

**SUB-CATEGORY:** NAVAL CONSTRUCTION FORCE SUPPORT UNIT (NCFSU)  
UTILIZATION

LINE HAUL TRANSPORTATION

**PROBLEM/ISSUE/LESSON:** Line-haul transportation assets available to NCF battalions were inadequate to meet MEF mobility requirements in Operation Desert Storm.

**DISCUSSION:** As the war strategy evolved, and deception and surprise elements of the strategy unfolded, both MEF HQ and its subordinate ground and air components moved large quantities of equipment and supplies. Supporting NMCBs were required to move as well. Base camps moved six times. NCF Dets were dispatched up to 200 miles from base camps.

In the early stages of Operation Desert Shield, the transportation echelon of the NCFSU was available, but not utilized in favor of host nation support. In retrospect, host nation support for line-haul transportation proved to be inadequate for NCF needs, despite the fact that more than 800 tractor trailers were leased by the USMC.

Before the start of the air war, leased assets were technically available, but demands of higher command echelons did not allow NMCBs access to them. Higher command responses to requests for transportation from the Regiment were unpredictable, unreliable, only partially fulfilled (e.g., 20%), and generally unmanageable. Once hostilities broke out, host nation support vanished as local drivers fled, or refused to drive north.

Vital missions were accomplished through creative "borrowing" and repair by NCF units of dozens of so-called "road-kills" (broken down MEF-leased tractor/trailers abandoned on the roadside). More than 20 were in use by one NMCB at war's end.

**RECOMMENDATIONS:** In future MEF-support operations, there is an immediate requirement to upgrade line-haul capability within the regiment. Review line-haul transportation capabilities of the NMCBs and NCFSUs, with an objective of ensuring capabilities exist to meet MEF mobility requirements as experienced in Operation Desert Shield/Storm. Establish procurement priorities to equip line-haul transportation echelons in the NCFSUs/PWMRS. Do not rely upon host nation support. Use the capability provided by the NCFSU.

CATEGORY: FORCE STRUCTURE

SUB CATEGORY: ACTIVE BATTALION AUGMENTS

PROBLEM/ISSUE/LESSON: Authorized peacetime manning of active NMCBs is currently set at 605 men. Authorized manning of reserve NMCBs is 739 men; as is the authorized "wartime" manning of active NMCBs. Consequently, in operation Desert Shield/Storm, active NMCBs were 134 short of authorized strength.

DISCUSSION: CINC planners use data that estimate vertical and horizontal capabilities of an NMCB based on M+1 manning. When active NMCBs are deployed into a contingency or war scenario at peacetime manning levels, they are often 25% short of planned staffing. An even greater deficiency exists in the key area of horizontal construction capability, as most of the difference between peacetime and wartime authorizations is in the EO/CM ratings.

RECOMMENDATION: OPNAV/NAVFAC/RNCF planners need to develop a method for quickly "fleeting up" active NMCBs to authorized wartime manning levels. If selected reservists are an option, augmenting personnel need to be structured within a viable reserve organization to ensure viable military and technical skill training programs exist.

Agree

CONTACT: NMCB COS

CATEGORY: TROOP ISSUES

SUB CATEGORY: UNIFORMS

PROBLEM/ISSUE/LESSON: The traditional Seabee green uniform strongly resembles the uniform worn by enemy [Iraqi] forces. Almost all coalition and U.S. Forces wore the desert tan, battle dress uniform. The similarity of appearance between enemy and Seabee uniforms presented opportunities for incidents of mistaken identity with potentially serious consequences, and caused uniform resupply problems in non-NCF fleet hospital and public works augment units.

FINDINGS: Seabees were the only coalition force in theater wearing the utility green uniform.

Seabees stood out and were being stopped at check points and harassed: ie; "Show me your ID card, where are you going? Who are you with?" because of being in greens. Troops in desert cammies were waved on through the check points.

On occasion coalition (non-english speaking) troops mistook Seabees for Iraqi troops, and held them at gun point until they could be identified, putting the Seabees in a dangerous situation.

While on perimeter security duty, desert brown "cammies" don't stand out in the brown desert sand like Seabee greens do.

Seabees in general across the desert shield/storm theater of operation wanted to know why they could not be put into the desert tan uniform. The saying around one of the seabee units stationed far to the north was "We seabees work and fight; but we don't go out at night".

Some Reserve Seabees called to active duty (fleet hospitals and PWC detachments) had only four sets of greens, and one pair of boots. After seven months of deployment, some of the Seabees still only had one pair of boots. This situation is "unsat" under any circumstances especially during a combat deployment. One pair of boots becomes a medical problem due to being unable to change out of wet boots, caused by sweating or rain.

*Tell them*

Seven congressional letters were answered in a three month period as to why Seabees were not wearing the same uniform as the rest of the U.S. troops. ie; "Is your bulldozer more valuable than my husband?" "You painted your dozers brown, but left my husband in greens!!!!"

Recommendation: The Naval Construction Force must continue to be prepared to respond to hostile contingency operation in support of Marine Expeditionary Forces. The proper uniform for Seabees

during peacetime is a hotly debated topic; however, when operating in a hostile environment where incidents of mistaken identity can lead to personal endangerment, tradition and personal preferences must stand down. The "Force" must focus its priorities on its most important asset it's men and women and provide them the personal protection they deserve. In future contingencies where hostile conditions exist, the NCF must be prepared to quickly adopt the common uniform of U.S. Forces.

CATEGORY: TROOP ISSUES

SUB CATEGORY: WEAPONS & 782 GEAR

STATEMENT: Individual weapons and 782 Gear were not deployed with the man.

DISCUSSION: After initial deployment of battalions into Saudi Arabia, relieving units arrived in country without weapons, were transported to battalion camp sites and assumed custody of departing battalion TOAs, including weapons. This procedure dictated a short period of time where individuals were unarmed. Also, individuals were not able to "zero-in" assigned weapons until after arrival in country. Live firing opportunities in Saudi Arabia were limited.

RECOMMENDATION: Operational Commanders must stay abreast of threat conditions and act accordingly. Individual weapons familiarization firing; however, is necessary to instill confidence in each individual so that he is prepared to defend himself and his shipmates. Every effort should be made to accomplish live firing at frequent intervals.

CATEGORY: TROOP ISSUES

SUB CATEGORY: TACTICAL INFANTRY TRAINING

ISSUE: Permanent change of station Seabees were being transferred into units deployed into the Desert Storm theater of operations without attending the required Tactical Infantry Training (TIT) prior to deployment.

RECOMMENDATION: Training regiments insure that personnel being transferred into a deployed tactical unit receive prescribed military training prior to being transferred into the unit.

CATEGORY: TROOP ISSUES

SUB CATEGORY: CLOTHING

PROBLEM/ISSUE/LESSON: In Saudi Arabia, the desert environment in winter presented a number of unexpected problems for NCF troops concerning cold weather, rain and standing water.

DISCUSSION: The standard issue NCF poncho was inadequate. It provided little protection from rain, often soaking through. Steel toed boots provided inadequate warmth in freezing temperatures. Waterproof boots or overboots were not available in quantity.

Environmental summary data prepared by NAVFAC in advance of NCF unit deployments regarding cold/wet weather warnings appear to have been overlooked as evidenced by widespread lack of preparation among the men (no field jackets, no watch caps, no long underwear, no sweaters, 1 pair of boots).

Adequate clothing under adverse weather conditions is a critical troop issue, affecting troop health, productivity and morale.

RECOMMENDATION: The NCF TOA in this area should be reviewed. Specific suggestions: replace the poncho with that used by the USMC (waterproof), or with rain suits; provide a full complement of waterproof boots, or overboots.

Establish deployment procedures to ensure unit review of in-theater environmental assessments prior to unit departures, promulgation of a list of appropriately tailored seabag items, and inspections.

CATEGORY: TROOPS ISSUES

SUB CATEGORY: CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL (CBR)  
OUTFITTING

ISSUE: Seabee CBR clothing, mask and replacement filter, were incompatible with Marine Corps gear making resupply difficult.

DISCUSSION: Seabee TOA CBR clothing is bulky, difficult to maneuver in and has a limited useful life after break out. Marine clothing on the other hand, is lighter, easier to wear, has greater maneuverability and can be used for a longer period of time. In-theater replacement stocks of Marine TOA gear were plentiful; whereas, Seabee TOA CBR gear was not.

Seabee masks were deemed superior to Marine masks by all interviewees. Life expectancy of filter canisters was still uncertain.

RECOMMENDATION: Re-evaluate Seabee TOA CBR equipment and determine a valid life expectancy of the filter canister. Replacement from Marine Corps stocks should be considered if future operations with Marine Combat Units is anticipated.



CATEGORY: RESERVE AFFAIRS

SUB CATEGORY: RESERVE FORCE UTILIZATION

PROBLEM/ISSUE/LESSON: Employment of Reserve Naval Construction Force (RNCF) assets in Operation Desert Shield/Storm was a profound success. RNCF units made outstanding and important contributions to the war-fighting effort, broadly validating the NCF's "One Navy"- "One-Force" concept and the RNCFs organization, manning equipment and training programs.

DISCUSSION: More than 2,800 (2,850) Seabee reservists were recalled to active duty in direct support of NCF war-related requirements. Mobilization worked. More than 97% of those recalled, served.

Approximately 1,000 recalled Seabee reservists were serving in-theater at the start of hostilities (mid-January 1991) representing about 38% of total NCF theater assets. Reserve units in theater included: one construction battalion, NMCB 24 (700 men); two hospital support units, CBHU 20 and 22 (160 men/women); a public works force, drawn from PWC Subic, Guam and Yoko/Pearl (150 men/women) and others supporting CENTCOM, NAVCENT, MARCENT/MEF and COMUSNAVLOGSUPFOR.

In addition, RNCF assets were mobilized to meet other essential Navy requirements, at NCF embarkation points in the U.S. (Port Hueneme, Gulfport) and at NCF deployment sites overseas (Guam, Subic Bay, Okinawa, and Puerto Rico). The first RNCF unit mobilized was CBC Port Hueneme, followed closely by PWC Subic, both units responded to key Navy/NCF priorities. Two Reserve construction battalions (NMCB 23, NMCB 16) were mobilized and accomplished CINC projects in the Pacific and Atlantic AORs.

Had the war continued, Reserve Naval Construction Force Units would have made even greater contributions, as evidenced by the OPNAV Naval Construction Force Employment Plan, promulgated 20 February 1991<sup>1</sup>. This plan outlined schedules for employing 10 additional RNCF construction battalions, and other augment units essential to sustaining an effective NCF PERSTEMPO.

RECOMMENDATION: Future NCF contingency planning and resource programming should build on this successful experience and strengthen NCF active/reserve integration. The Reserve Naval Construction Force, its units/members, proved ready, able and willing to accomplish tasks assigned and made significant and unique contributions to overall Force capability/sustainability.

CONTACTS: I MEF, 3RD NCR, OPNAV, NAVCENT, CBPAC, CBLANT

<sup>1</sup> Refer to Appendix N (67), NCF Employment Plan.

**CATEGORY:** RESERVE AFFAIRS

**SUB CATEGORY:** OMBUDSMAN PROGRAM

**PROBLEM/ISSUE/LESSON:** The Ombudsman Program provided valuable family support; however, improvements can be made.

**DISCUSSION:** Due to lack of published policy, each Naval Reserve Center operated differently. Many were extremely supportive, providing the detachment Ombudsman with supplies, access to copiers, information, etc. Several centers refused support of any kind, stating that the reserve Ombudsmen were not part of "their" staff, nor were they appointed by the center and therefore weren't authorized support. A few of the reserve centers refused to allow the Ombudsmen to do their jobs. The active duty Ombudsmen wouldn't let go, causing confusion for the families since they were receiving conflicting information from two different sources. The reserve center Ombudsmen felt it was their job and nobody was going to interfere.

Twice, the Readiness Commander sent out letters to all the families of the reservists with a statement about if they had any type of problem, his staff as well as himself were there to help. It was great that the staff was there and wanted to help, but it created problems for the Ombudsmen. Reserve families don't understand the chain of command or keeping things at the lowest level. There were many problems/issues that went directly to the REDCOM because of the Admiral's letter. Many of these were already being resolved, and valuable time and effort were wasted by duplication.

On a positive note - the support received from the American Red Cross in all locations was totally phenomenal. No matter what the issue, they were there to help. The Ombudsmen, as well as all reservists and their families, benefited from the actions of the Red Cross. "KUDOS" to the American Red Cross.

**RECOMMENDATION:** COMNAVRESFOR, with input from COMRNCF, should promulgate written guidance as to the role of the Unit Ombudsman and the required/authorized support to be given by the reserve centers. The role of the REDCOMs and their relationships to the unit (detachment) Ombudsmen should also be addressed.

CATEGORY: RESERVE ISSUES

SUB CATEGORY: TRAINING

PROBLEM/ISSUE/LESSON: Reserve training needs to be strengthened in two key areas: military skills and combined service exercises.

Military skills were not adequate upon arrival in theater to meet requirements, necessitating supplemental training. Key deficiencies were: CBR training at MOPP-4 for extended periods; training on the AT-4, instead of the LAAW; full 360 degree defensive perimeters, vice 180; defense of large base camp areas (up to 4 square miles); crew served weapons (not enough redundancy to allow rational make-up of construction dets under tactical conditions); need for a greater number of CBR specialists; communications training especially at MOPP-4; full blown, scripted military field exercises; command post exercises, with greater appreciation for use of external assets (air, artillery, infantry); and mine recognition and response training.

In addition, numerous and important lessons were learned with the combining of NCF units with another service (USMC). Weaknesses in combined operations need to be systematically identified and corrected on a continuing basis in peacetime.

In general, professional skills areas were not a problem. Use of non-rates and junior petty officers who did not work in their ratings in civilian life was not a problem. Construction management of large, integrated efforts was not a problem.

RECOMMENDATION: A RNCF study group, with members including participants of mobilized units, should review all training requirements (SORTS) and programs to strengthen military defensive capabilities across the board. Reinstate the military AT in the 3-year RNMCB retraining cycle. Formulate and explicitly list requirements for satisfactory completion of the FEX. Increase RNCF unit participation in joint exercises with other service components, especially the USMC for MEF-aligned NMCBs/NCFSUs, and fleet hospital units for the CBHUs.

CONTACTS: NMCB 24, CBHUs

CATEGORY: RESERVE AFFAIRS

SUB CATEGORY: RECALL ISSUES

DISCUSSION: An excessive number of problems occurred during the Reserve recall process. The vast majority of problems resulted from the procedures and policies of BUPERS/COMNAVRESFOR. There appears to have been little effort to coordinate reserve personnel and pay procedures. This lack of coordination caused excessive workloads in recalling a SELRES to active duty and resulted in unnecessary trauma for the recalled reservist.

A typical example is a SELRES who was on direct deposit for Naval Reserve pay. He had to be totally reprocessed when recalled to be on direct deposit as active duty Navy. This should have been a simple computer to computer transfer. Other problems were experienced in accessing medical care, family benefits, dependent identification cards and benefits, travel to port of embarkation, etc.

RECOMMENDATION: A study team, under the leadership of OP-095, should review all recall procedures and develop a prioritized list of recommended actions to make the crossover from reserve status to active duty a simple, non-traumatic event.

CATEGORY: RESERVE AFFAIRS

SUB CATEGORY: RECALL ISSUES

VOLUNTARY RECALL

ISSUE/PROBLEM: Procedures for voluntary recall of a Selected Reservists (SELRES) are excessively complex.

DISCUSSION: Individuals involved in processing SELRES to active duty on a voluntary recall basis stated that the procedures are too paperwork intensive, slow, unresponsive, and cumbersome. Many qualified "volunteers" are lost due to the inefficiency of the system.

RECOMMENDATION: NMPC/BUPERS should review voluntary recall procedures and streamline as appropriate. If an individual is a drilling selected reservist, the cross-over from inactive reserve to active duty status should be made responsive to the needs of the "one" Navy concept, rather than an endurance test in filling out blank forms and regenerating information which is already "on file" in official records.

CATEGORY: RESERVE AFFAIRS

SUB CATEGORY: OFFICIAL INFORMATION

ISSUE/PROBLEM: Numerous Navy sources provided "official" information to dependents of recalled reservists which in many cases was incorrect, misleading, and/or in conflict with correct information.

DISCUSSION: Significant amounts of misinformation were disseminated to recalled reservists' dependents from various Navy sources (i.e., the reserve center, the recalled unit, other reserve units, etc.). This problem is a shared responsibility between various commands and activities.

RECOMMENDATION: Strict chain-of-command procedures initiating from the recalled unit's CO should be followed in disseminating information to recalled reservists. The official unit OMBUDSMAN program should be understood and utilized by dependents. REDCOMS/RESCENS should be the primary source of information for dependents rights, privileges, and general knowledge.

A working group comprised of reserve and active duty Navy representatives should be convened to study this problem. An information pamphlet explaining the OMBUDSMAN program, the rights and benefits of recalled reservist and sources of official information should be published and made available to dependents.

CATEGORY: RESERVE AFFAIRS

SUB CATEGORY: POST OFFICE

ISSUE/PROBLEM: A recalled NMCB is required to operate a post office; one recalled NMCB was denied authority to do so.

DISCUSSION: Operating a post office is required by OPNAVINST 3501.115B, Projected Operational Environment (POE) and Required Operational Capabilities (ROC) and is a critical morale factor, especially in remote areas. Recalled Reserve units must have the same capabilities as their active counterparts in order to be fully compatible.

RECOMMENDATION: Recalled reserve SEABEES Battalions should operate a post office just as their active duty counterparts do. NAVFAC should evaluate this problem and develop procedures to ensure this critical function is attainable by recalled reserve NMCBs.

no

CATEGORY: RESERVE AFFAIRS

SUB CATEGORY: DISBURSING

ISSUE/PROBLEM: A recalled NMCB is required to have disbursing capability; one recalled NMCB did not.

DISCUSSION: Having disbursing capability is required by OPNAVISNT 3501.115E (Projected Operational Environment (POE) and Required Operational Capabilities (ROC)); and enhances contracting capability by having the organic ability to pay vendors. Having a full service disbursing officer on board at mobilization is not required, but having the required disbursing capabilities; for example, having the capacity to cash individuals' personal checks and pay vendors; is critical. A recalled reserve NMCB must have the same capabilities as its active counterpart in order to be fully integrated into the active forces.

RECOMMENDATION: Recalled reserve NMCBs must be capable of conducting disbursing functions. NAVFAC should develop procedures to ensure this critical function can be accomplished by the recalled NMCB. A suggested solution is for NAVFAC to arrange with NAVCOMPT or another activity for committing an individual (probably a DKC or DK1) who would perform certain disbursing functions (i.e. cashing personal checks and paying vendors). This individual would join the unit upon recall and remain until the unit returns to its former reserve status, or the assistant supply officer becomes qualified as a disbursing officer.

*RNCF decision*



CATEGORY: RESERVE AFFAIRS

SUB-CATEGORY: MILITARY PAY

PROBLEM/ISSUE/LESSON: Reserve and active duty pay systems are on parallel tracks without the ability to cross over. All recalled Reserve units experienced problems paying their personnel. The most devastating problems were experienced by the non-commissioned units which lacked organic disbursing capability. One unit recorded 50% of its personnel being paid incorrectly two months after recall; 20% experiencing problems four months after recall; and up to six months for final individual problem resolution.

DISCUSSION: Being recalled to active military service in a time of crisis or national emergency is traumatic for most reservists. Adjusting from civilian salaries to military pay can add a significant hardship during an already stressful time. The inability of the Navy to rapidly determine and produce an individual's proper pay is inexcusable. The Navy must be responsive to protecting the welfare of its most valuable asset - its men and women.

On mobilization, recalled reserves are treated as new accessions into the Navy. This requires manually creating a new Master Pay Account for each individual. Not only is this a duplication of effort, but this quantity of manual effort during a rapid mobilization has the obvious built-in potential for errors. It also requires validating correct and complete personnel records for the pay input process. For example, a recalled NMCB must create 700 (+/-) new pay accounts while only being staffed to "maintain" this number of pay records.

The Direct Deposit System (DDS) was a problem; it was a required pay procedure for all recalled reserves, yet the system was not prepared to make it work. Credit unions and smaller banks were a particular problem, as they typically did not have direct wire fund transfer capability. They generally work through a larger, corresponding bank, requiring a two-tier routing number process that routinely failed.

Reservists who had previously (within the reserve pay system) successfully resolved DDS routing problems; documented their dependent status; and otherwise solved unusual problems, found themselves starting all over again. This at a time when they were facing substantial civilian-to-military pay cuts and deploying to overseas locations.

Entitlements were also slow to take hold; FSA, foreign duty pay, imminent danger/hostile fire, etc., were very erratic in kicking in. If the base pay/BAQ had been working better, the fluctuating entitlement pay would have been more tolerable. When entitlements

finally were working, they would fall off randomly, in ways never determined. Or a reservist would be getting proper pay for several pay periods, then his/her "years of service" would drop to zero or the pay grade would change, or three months of hostile fire pay would be deducted, or some other problem would occur which would negatively effect pay and morale.

One systematic problem was caused by the 90 day incrementing of orders. Direct deposits and other entitlements would be cancelled in anticipation of the member separating. A built in over-ride system would have been useful.

RECOMMENDATIONS: The pay "mess" should be presented to the highest levels of the Navy. The practice of maintaining two parallel track pay systems without the ability to "cross-over" is inexcuseable. Reservists drawing inactive duty "drill" pay are required to verify the same personal data (marriage, dependent data, date of advancement, years of service, etc.) as their active duty counterparts. Direct Deposit Systems are also routinely used. The philosophy of "everything stops and must be started over" is ridiculous and detrimental to all concerned. A single "crossover" technique must be built-in to facilitate pay for recalled reservists. The Navy has the responsibility and the duty to correctly pay its personnel in a timely manner.

CONTACTS: (NR) PWC SUBIC; NMCB-24; NCFSU-4

CATEGORY: RESERVE AFFAIRS

SUB CATEGORY: PERSONNEL RECORDS

PROBLEM/ISSUE/LESSON: Personnel service records were not allowed to accompany all commissioned NMCB reserve units to the deployment area, seriously compromising personnel management functions and capabilities. Such policy is contrary to active NMCB practice, and creates a confusing and frustrating "two-Navy" concept.

DISCUSSION: NMCBs are staffed with PN/YN personnel and a ships clerk to maintain all unit personnel records in accordance with the ROCs and POEs. Unfortunately, in a sweeping directive, OP-01 ordered most service records of mobilized reserve personnel to be retained by the PSD, at the point of embarkation or, as in the case of some NCF units, at a central PSD INCONUS. Some NCF units were forced to deploy without personnel records, despite their self-sustaining capabilities and mission; giving rise to serious administrative problems and frustrations. Problems in NMCB 24 were eventually solved by reconstructioning records on-site using copied and faxed materials.

RECOMMENDATION: Mobilized NMCBs should be allowed to exercise their established authorities and responsibilities. A "One-Navy" concept should be promoted with policies sensitive to active/reserve interfaces.

CONTACT: NMCB 24

CATEGORY: LOGISTICS

SUB CATEGORY: CESE REPAIR PARTS SUPPORT

PROBLEM/ISSUE/LESSON: Timely delivery of repair parts for "deadlined" equipment is an important element in sustainability of NCF capabilities. Failure to do so, reinforces an attitude that deadlined equipment is acceptable which encourages equipment neglect and abuse. Generally, during Operation Desert Shield/Storm, repair parts not stocked by a battalion, would require 30 plus days from the time the need for a particular repair part was identified to the time it was received by the battalion. The best turnaround appeared to be 15 days but this was not the general rule. Timely delivery of repair parts faced numerous barriers during Desert Shield/Storm which included:

NCF equipment was generally not compatible with Marine Corps equipment.

Certain NCF equipment was non-standard<sup>1</sup> which required special handling by the supply system. Repair parts for non-standard equipment do not have Navy Stock Numbers (NSNs).

NCF units were directed to submit supply requisitions to the MEF (which had only limited resupply capability for NCF equipment) and wait until the MEF indicated non-availability (which might consume five plus days) before seeking the item from other sources.

NMCB supply officers were initially prohibited from exercising their contracting authority.

Only limited repair parts support could be obtained from local vendors.

Most units in theater utilized very high priority codes when requisitioning critical items which tended to overload the supply system.

NCF units were directed to utilize the Supply Department of NCBC Gulfport as the CONUS supply point, but there appeared to be some lack of initiative by NCBC Gulfport in accessing other CONUS resources (NCBC Port Hueneme, NAVFAC, DOD Supply Activities, computer aided management systems, etc.) that could assist in filling the

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<sup>1</sup> Items are considered non-standard by the Navy Supply System until stock numbers are obtained by CESO. Requisitions and obtaining stock numbers may take as long as one year.

requisition.

During certain periods, air cargo terminals in CONUS experienced delays.

Air heads in theater experienced backlogs regarding processing/distribution of incoming shipments.

Possible under reporting of "deadlined" equipment by NCF units may have contributed to senior commanders attitudes that the supply delays were not excessive and did not impact operational readiness.

**RECOMMENDATION:** None. Provided for information only.

CATEGORY: LOGISTICS

SUB CATEGORY: REPAIR PARTS STOCKAGE

PROBLEM/ISSUE/LESSON: Types and quantities of repair parts stocked by NCF units appear to be inappropriate.

DISCUSSION: During Desert Shield/Storm the NCF had in excess of 1,000 pieces of CESE in theater. This required approximately 700 tons (equivalent weight of twenty-five D7 bulldozers) of repair parts support as part of TOA's, which were as moved into theater. Even with this massive amount of repair parts support, a significant amount of equipment was deadlined due to lack of repair parts. Manufacturers' recommendations for repair parts support appear not to have been utilized. Equipment Repair Orders (EROs) appear not to have been reviewed by CESO in establishing the COSAL allowance. The COSAL contains an abundance of pistons, rings, crankshafts, and other items which have a low probability of being utilized by a deployed NMCB.

RECOMMENDATION: An item by item review of all repair parts in a NCF units' TOA should be conducted for the purpose of maintaining an appropriate mix of repair parts support to reduce the amount of deadlined equipment. Corrective actions need to be established and reinforced on a continuing basis.

CATEGORY: LOGISTICS

SUB CATEGORY: CONTRACTING AUTHORITY OF NMCBS

PROBLEM/ISSUE/LESSON: Greater utilization of contracting authority currently held by NMCBS would have improved repair parts and construction materials availability.

DISCUSSION: Supply Corps officers and certain senior enlisted members may serve as contracting officers after meeting specific minimum requirements. These requirements are not difficult to achieve. Most repair parts for deadlined equipment and many critically required construction materials can be obtained in a reasonable period by a support unit, battalion, or regimental contracting officer by purchasing the item directly from a local vendor or CONUS based vendor.

RECOMMENDATION: Each NCF unit that has CESE and a Supply Corps officer, plus each NCF regiment commanding such units, should have a contracting officer with at least minimal purchasing authority. These contracting officers should be tasked to exercise contracting authority at regular intervals.

CATEGORY: LOGISTICS

SUB CATEGORY: NCF SUPPLY PROCEDURES

PROBLEM/ISSUE/LESSON: Differences in supply procedures between the NCF and the Fleet, and even within NCF units such as COMCBPAC and COMCBLANT, posed unnecessary difficulties during resupply operations.

DISCUSSION: Battalion supply department personnel stated that: NCF and Fleet supply procedures are sufficiently different to require that storekeepers arriving from the Fleet be trained in NCF procedures; because storekeepers assigned to NCF units utilize different procedures, they are at a disadvantage when competing for advancement against their Fleet counterparts; COMCBLANT and COMCBPAC have different resupply procedures.

RECOMMENDATION: NCF supply procedures should be reviewed for the purpose of retaining only those non-Fleet procedures which are absolutely required in the operation of the NCF. Every effort should also be made to eliminate differences between COMCBLANT and COMCBPAC procedures.



CATEGORY: LOGISTICS

SUB CATEGORY: NCF UTILIZATION OF THE MARINE CORPS SUPPLY SYSTEM

PROBLEM/ISSUE/LESSON: NCF use of the Marine Corps Supply System.

DISCUSSION: Marine Corps supply procedures are different from procedures normally encountered by NCF units. SWA deployed NMCB supply departments indicated that Marine Corps supply procedures were not difficult, but required training to facilitate access and system response.

RECOMMENDATION: Prior to deployment and attachment to a Marine MAGTF, the deploying NCF unit should schedule training for deploying personnel on supply procedures, forms, etc. and specifically on the Marine Corps the Standard Automated Supply System (SASSY).

CATEGORY: LOGISTICS

SUB CATEGORY: RESUPPLY TIME

PROBLEM/ISSUE/LESSON: An excessive amount of time was required to receive CONUS supplied items.

DISCUSSION: During the early stages of wartime contingencies, the Navy supply system generally does not respond rapidly. Even assuming prompt action by CONUS supply activities, significant delays are encountered in transportation and distribution. When utilized by NCF units, expeditors acting at key locations along the resupply chain can be highly successful in reducing these delays.

RECOMMENDATION: A Seabee expeditor team should be established at the commencement of a wartime contingency. Team members should be positioned at key CONUS supply activities, CONUS air terminals, and theater air heads and supply points. The team would be tasked with managing all critical requisitions processed in CONUS. In a situation such as Desert Shield/Storm the team should be responsible to the regiment commanding the NCF units in theater.

CATEGORY: LOGISTICS

SUB CATEGORY: MEF CLASS IV/MLO

PROBLEM/ISSUE/LESSON: Should the MEF Class IV/MLO yard be stocked with generic lumber at commencement of a contingency or war?

DISCUSSION: When most construction projects require project approval at a level senior to the MEF, there is insufficient time available to procure construction materials after project approval, and still satisfy the customer's deadline. The MEF utilized USMC O&M funds to stock a Class IV/MLO yard with generic lumber (i.e, 2X4s, plywood, etc.) at the commencement of Desert Shield. This allowed certain NCF tasked projects to be initiated early in the contingency. This procedure expedited initial construction progress.

RECOMMENDATION: The NCF should strongly recommend to the USMC that in future operations, a Class IV/MLO yard be fully stocked with generic lumber and other generic construction materials as rapidly as possible after commencement of the contingency.

CATEGORY: LOGISTICS

SUB CATEGORY: OPERATING THE MEF CLASS IV/MLO

PROBLEM/ISSUE/LESSON: Should the NCF operate the MEF Class IV/MLO yard?

DISCUSSION: During Desert Shield/Storm the NCF regiment, utilizing battalion personnel, operated the Class IV/MLO yard on behalf of the MEF.

RECOMMENDATION: Under current doctrine and policy, the NCF should determine if this is to be a tasking in future operations. If so, staffing should be provided by regimental personnel. A secondary source of staffing could be personnel from the regiment's NCFSU. Utilizing Battalion personnel for this purpose reduces manpower availability for other Battalion taskings.

CATEGORY: NAVCENT SUPPORT

SUB-CATEGORY: NAVAL LOGISTICS SUPPORT FORCE (NAVLOGSUPFOR)  
OVERVIEW

DISCUSSION: From August through October 1990, U.S. Naval forces in the Central Command (CENTCOM) area of responsibility grew rapidly. Commander, Naval Forces, U.S. Central Command (NAVCENT) was required to create a housekeeping organization to oversee his shore-based logistics support network. Commander, U.S. Naval Logistics and Support Force (COMUSNAVLOGSUPFOR) became the command responsible for providing logistic support to the ships at sea, and for oversight of NAVCENT's shore-based activities.

As COMUSNAVLOGSUPFOR assumed his duties, his staff grew to over 200 people. The number of Naval shore-based personnel supported grew to over 14,000. The number of Navy ships that required logistic support for personnel, mail and high-priority cargo peaked at 110. The NAVCENT/LOGSUPFOR Engineering (N-7) staff was responsible for providing ashore facilities to support the logistics requirement of ships operating in the Arabian Gulf and the Red Sea.

The broadly-based tasking to the Assistant Chief of Staff for Engineering (ACOS-Engr) was to provide facilities and transportation assets sufficient to support the mission; including engineering liaison. In the Desert Shield environment, those taskings were largely implemented by facility leases, Host Nation (HN) facility loans, some improvements to loaned facilities (gift-funded), and management of gift-funded transportation assets. Leased facilities were used primarily to meet personnel berthing and warehousing needs. Sufficient facilities were available for lease to meet those needs from in-theater assets. Virtually all operational facilities were loaned, most of which required some improvements that were provided primarily through Government of Japan Assistance-in-Kind (GOJ AIK) funding. Administrative vehicle support requirements were largely addressed with GOJ AIK assets. All of the AIK resources were accessed through close liaison with the CINCCENT logistics & engineering staffs (CC J4/7). The Navy CEC Liaison Officer to CINCCENT J4/7 was in turn largely responsible for structuring and implementing the entire GOJ AIK Program for all CINCCENT components.

Prior to Desert Shield, the NAVCENT "core" engineer staff fell under ACOS for logistics. Subsequent to development of significant construction project scopings, and the assignment of Seabee resources and a more senior staff, the ACOS-Engr was established as a separate department (N-7) in late December 1990. The NAVCENT core engineer staff consisted of a LCDR billet for planning and a LT billet for facilities. In accordance with the rotation policy established by LOGSUPFOR, the two core staff

engineer billets were used to staff one core engineer position in theater, and another staff engineer billet at NAVCENT (Rear) in Hawaii, with a 90 day rotation cycle; a procedure which tended to complicate custody and other continuity issues.

The initial augment staff consisted of two CEC CDRs and one E01; who were followed in short order by a CEC LCDR (to relieve a CEC LT as Liaison Officer (LNO) to the Regional Contingency Construction Management (RCCM) cell at CINCCENT Riyadh); the Administrative Support Unit (ASU) Bahrain; and a CEC LTJG (to augment ASU Public Works Department). When the need developed for additional Seabee assets under operational control of NAVCENT, a detachment of 143 Enlisted and four Officers from NR PWC Subic was transferred into theater in December 1990. Those personnel augmented both ASU Public Works and the LOGSUPFOR N-7 staff. There were subsequent relief rotations in N-7 for the Deputy ACOS (CDR) and the RCCM Liaison (LCDR) in February 1991. NR PWC Subic was relieved by RCBHU-22 in April 1991. The N-7 staff responsibilities were divided into three major functions: facility planning; facility acquisition; and facility & equipment management. The augment staff was generally responsible for planning and acquisition, while the core staff was generally responsible for management. The rationale being that the management tasks could be performed by the solitary core staff officer, who would remain after planning and acquisition had been completed.

The Navy made no provision for any MILCON funding of Desert Shield requirements. All of the Navy construction was provided from GOJ AIK sources. GOJ funding was made available in two types of accounts: one as currency and one as AIK. Due to the actions of Congress and DOD, access to the GOJ-AIK currency account for construction financing became unmanageable. The AIK funding was initially set up, as contracts between Japanese trading companies and vendors of equipment and materials, to provide primarily construction materials in support of troop projects. Since NAVCENT had virtually no troop assets, the N-7 staff and Navy RCCM LNO devised a means, with GOJ approval, to take delivery of materials in-place from material suppliers who were qualified to do so. The Navy LNO exercised good judgment and ingenuity in awarding an Indefinite Time Delivery Contract (ITDC) to Eastern Asphalt and Mixed Concrete Company (Eastern) which turned out to be an exceptionally capable and well-managed company. Eastern delivered over \$17 million of "work in place" in Bahrain. Following the success of the Eastern contract, CINCCENT awarded a similar GOJ-AIK funded contract to Bechtel Corporation for construction throughout theater. Overall control of projects and prioritization was established within CINCCENT by requiring submittal of an expedient version of the standard DOD MILCON project package. The standard submittal consisted of a one-page DD-1391, site plan, and host nation site approval. The project approval process was extremely efficient - some projects having been started within two days of package submittal.

NAVCENT projects could be categorized in three groups: airfields/aviation support; hospitals; and other support bases. In chronological order, airfield projects were done at Jeddah, Saudi Arabia; Muharraq, Bahrain; Doha, Qatar; Fujairah, U.A.E.; and Hurghada, Egypt. Hospital projects were done at Jubayl, Saudi Arabia; Manama, Bahrain (Army); and Awali, Bahrain. Other support base projects were done at ASU, Bahrain; Port Zayed, U.A.E.; Half Moon Bay, Saudi Arabia; and Tabuk, Saudi Arabia.

The N-7 staff was also assigned primary responsibility for physical stand-down of the LOGSUPFOR organization. That responsibility has been focused in three areas: site restoration; equipment recovery and repositioning; and construction of facilities in support of Naval force reconstitution. Reconstitution has been hindered by the absence of funding to provide major pier rehabilitation in Bahrain and taxiway/parking apron expansion in U.A.E.

CATEGORY: NAVCENT SUPPORT

SUB CATEGORY: FLEET HOSPITAL SUPPORT

OVERVIEW: Three fleet hospitals were employed in operation Desert Shield/Storm. Fleet Hospital FIVE deployed in August 90; Fleet Hospital SIX and FIFTEEN were reserve units recalled and deployed in January 1991.

Fleet Hospital FIVE: located at Al Jubayl, this unit was a composite of medical personnel from Bethesda, MD and Portsmouth, VA. Seabee personnel were drawn from Construction Battalion Units CBU's 411 and 415. All personnel were active duty Navy.

Public works taskings at FH-5 somewhat exceeded the capabilities of assigned personnel. In peacetime most CBU Seabees are engaged in small construction taskings to improve troop welfare and morale and reduce MRP backlog at their assigned bases. Maintenance and public works functions at a fleet hospital were unfamiliar to many personnel. Also, training in hospital unique items, such as generators and cold storage reefers had not been accomplished for some Seabee personnel. Fire fighting training was deficient. It became necessary in December 1990 to augment the hospital's Seabee staffing with an additional 21 reserve personnel with selected technical specialties. All Seabee personnel experienced difficulty in replacing worn green uniform articles and boots because all other hospital personnel wore the battle dress uniform and the unit did not stock "green" uniform articles.

Fleet Hospitals SIX and FIFTEEN: both FH-6 and FH-15 are reserve units which periodically train at the fleet hospital training platform at Camp Pendleton, CA. Even though the units were not mobilized as long (JAN-MAR'91), maintenance and staffing problems did not surface. Seabee unit OIC's believe staffing and technical skill levels were "about right" with the exception of fire fighting. Both OIC's cited the "green" uniform as a problem ( no replacements available and only one pair of boots issued to each man). Both units cited COSAL support for CESE equipment as "poor." The adequacy of the TOA fire fighting equipment was questioned.

Recommendations: Convene a conference involving OPNAV, (OP-44, Op-93) NAVMEDCOM, NAVFAC, and deployed unit key personnel, to evaluate training program deficiencies and other lessons learned.

Authorize Seabee personnel to wear the same uniform as the gaining command so that replacement of worn out items can be routinely accomplished.

Evaluate the acceptability of using non-deploying Construction Battalion Hospital Units (CBHU's) as Construction Battalion Maintenance Units (CBMU's) for forward deployed sites.



CATEGORY: NAVCENT SUPPORT

SUB-CATEGORY: ENGINEER STAFF AUGMENT (CEC/SEABEE)

PROBLEM/ISSUE/LESSON: NAVCENT CEC/Seabee staffs were inadequate to support the warfighting mission. Redeployment of Naval Forces into the AOR remains a possibility.

BACKGROUND: Prior to the rapid build-up of U.S. forces in the Persian Gulf region, NAVCENT was staffed with only one CEC staff civil engineer. The Administrative Support Unit (ASU) in Bahrain which provides on-shore administrative and logistical support to Naval forces afloat and remote airheads, was staffed with one CEC officer and 22 enlisted Seabees.

With the build-up of U.S. forces in the region, five forward logistics supports sites were opened. This caused ASU - Bahrain's Public Works Department job tasking to increase significantly. With the current instability in the region, the requirement to rapidly redeploy Naval Forces into the AOR remains a possibility.

DISCUSSION: NAVCENT must plan to rapidly upgrade shore logistics support capabilities to meet possible contingency situations. A cost effective way of providing the contingency capability is by creating a Naval Reserve augment unit, trained to provide the required support. CEC/Seabee resources by necessity must be a significant portion of any such reserve augment unit.

RECOMMENDATION: Several key elements should be considered:

Upgrade the current NAVCENT active duty CEC billets from 0-4 billet to 0-5.

Place high priority on funding potential reconstitution support facilities in the AOR.

Provide input to NAVCENT to increase active duty staff of ASU, Bahrain, and develop a CEC/Seabee reserve augment staffing plan to upgrade NAVCENT's logistical support capabilities. ASU's Public Works Department will require a "plus-up" augmentation of approximately 50 personnel. A proposed staffing plan is being developed.

Because of the unstable political situation in countries where FLSS are located, Seabee units deployed to these sites must be organized, trained and equipped for military (defensive) operations. Construction Battalion Maintenance Units (CBMUs) are recommended.

CATEGORY: NAVCENT SUPPORT

SUB-CATEGORY: FORWARD LOGISTICS SUPPORT SITES (FLSS) STAFFING

PROBLEM/ISSUE/LESSON: Operation Desert Shield/Storm required Seabee maintenance support at several forward logistics support sites (FLSS) and remote airheads.

DISCUSSION: FLSSs and airheads can be located in remote areas where political unrest, terrorism or hostilities toward U.S. forces exist, requiring military manning. Seabee support requirements vary in proportion to the OPTEMPO at the site and may be required for short or long periods of time. Seabee support of forward deployed NAVCENT sites during Operation Desert Shield/Storm averaged 15 or less personnel per site.

RECOMMENDATION: Organize, train, and equip Reserve Construction Battalion Maintenance Units (CBMUs) to provide operational commanders flexibility in supporting FLSS and remote airhead locations. Units should be capable of conducting defensive military operations and trained in facility maintenance skills.

CONTACTS: NAVCENT, NOAC

CATEGORY: CINCCENT INTERFACESUB CATEGORY: OVERVIEW

DISCUSSION: Commander-in-Chief, U.S. Central Command (CINCCENT) effectively controlled in-theater construction through his J4/7 (staff engineer). Service component Commanders were required to submit standard form 1391 documentation for all projects in excess of \$200,000 and obtain CINCCENT approval for funding prior to initiating construction. Projects or materials procurement below the \$200,000 threshold were left to the component commander's discretion if component funding was utilized. If CINCCENT funding was required, the project would be routed through the Regional Contingency Construction Manager J4/7 for prioritization & funding. Because component commanders were reluctant to utilize service funds; only the Army reprogrammed MILCON funds to support Desert Shield construction; and both the Saudi Arabian and Japanese government required CINCCENT approval prior to expenditure of their funds, CINCCENT effectively controlled all meaningful expenditures.

CINCCENT's, J4/7 was assisted in his prioritization/funding efforts by a liaison officer (LNO) from each service component. These officers formed the Regional Contingency Construction Management (RCCM) cell.

The LNO would gather the required documentation (1391, Bill-of-materials, site approvals, etc.) and speak as a proponent for the project. After approval, the LNO would follow the project through either the Host Nation procurement process (Saudi Government), Assistance-In-Kind (AIK) (primarily Government of Japan (GOJ)) procurement. With the preponderance of host nation and GOJ funding available, prioritization was seldom required until after the ceasefire when only residual funding was available for allocation.

Projects for NAVCENT were rapidly approved and delivered in a timely manner. An aggressive Navy LNO expedited the process and innovatively used Indefinite Time Delivery Contracts (ITDC) to deliver materials (asphalt in parking aprons, etc.) in-place. The success of the ITDC contracts with NAVCENT prompted expansion of the program theater-wide. (see Naval Logistics Support Force Overview)

In the MARCENT Area of Responsibility (AOR), project approval appeared to take longer. MARCENT experienced considerable difficulty in submitting correct documentation in a timely manner. Material requests and project approvals were delayed and deliveries were slow. Host Nation procurement of construction materials moved much slower through the Saudi Government than through the Government of Japan. Saudi requirements for detailed bills of materials for each project and other documentation were

burdensome. The THIRD Naval Construction Regiment (3rd NCR) expressed frustration at the process, but was insulated from interfacing with CINCCENT by the Regiment's subordination to the MARCENT Engineer. It is doubtful that the MARCENT/CINCCENT interface and project approval procedures were clearly defined or understood by all concerned until several months of trial-and-error attempts had passed.

Construction design above the organic level of NAVCENT and MARCENT was managed by the U.S. Army Corps of Engineers through its Mid-East/Africa Project Office (MEAPO). Some designs were referred to CONUS consultants or handled in-house. Design work was also managed in-theater by MEAPO through ITDC with Bechtel. Rapid turnover of Army Corps of Engineer Staff Officers created some continuity problems.

Procurement of construction materials by the Saudi Government and the Government of Japan eliminated the requirement for the RCCM to allocate construction materials resources among the service components for like materials. Anticipated price run-ups did not occur during Desert Shield/Desert Storm due to the minimal amount of component "buys" and their limited dollar value (\$200,000 max). The preponderance of Host Nation and AIK funding effectively eliminated project prioritization problems and competition in funding resources. Troop construction assets above Corps level (available for reassignment by CINCCENT) never became a reality due to the short duration of the conflict and component commander's requirements for "organic" assets. Also, Echelon-Above-Corps (EAC) assets did not come into theater in time to become viable assets.

CATEGORY: CINCCENT INTERFACE

SUB CATEGORY: HOST NATION SUPPORT

PROBLEM/ISSUE/LESSON: Host Nation Support is a limited force multiplier, not a substitute for organic capabilities.

DISCUSSION: Host Nation Support was provided principally by Saudi Arabia and Japan. This support was centrally managed by CINCCENT and disbursed to all service components under various rules and procedures. Construction design above organic capability was provided by either in-house capability or under an Indefinite Time Delivery Contract (ITDC) with Bechtel. Construction work was also accomplished under this contract. Contracting services were slow in being implemented and were not fully activated until January 1991. Material deliveries were limited to no closer than 10 miles of the Kuwait border. Upon commencement of the air/ground war, contractor personnel departed the area of Saudi Arabia north of Jabayl; degrading their usefulness.

In rear areas, and in some other areas prior to the commencement of hostilities, Host Nation Support was exceptional. MARCENT received over \$100 million of completed construction contracts and construction materials for SEABEE equipment and operations (both leased and donated). NAVCENT also received in excess of \$75 million. This level of support is extraordinary and was a key factor in allowing the services to rapidly accomplish required construction taskings.

RECOMMENDATION: Host Nation Support/Contracting has its advantages, but under limited circumstances. In forward areas, it should be viewed as a limited force multiplier, whose value decreases directly in proportion to the perceived risk of combat damage to the contractors and their civilian personnel. In rear areas or areas where the casualty risk is low, Desert Shield/Desert Storm proved that Host Nation support works well. For maneuvering, such as war fighting units are required to do, Host Nation Support, however, is not a viable option.

CATEGORY: CINCCENT INTERFACE

SUB CATEGORY: CONTRACT CONSTRUCTION AGENT (CCA) INTERFACE

PROBLEM/ISSUE/LESSON: Interfaces between NAVCENT & CINCCENT's contract construction agent in-theater were poor.

DISCUSSION: The Corps of Engineers' Mid-East/ Africa Project Officer (MEAPO) served as CINCCENT's Contract Construction Agent. As utilized by the CINC, MEAPO provided virtually no tangible support for the MEF/NCF, but did provide significant construction support for NAVCENT outside the MARCENT AOR. CINCCENT tasked MEAPO to provide design and construction administration on three major projects for NAVCENT (aircraft taxiways, aircraft parking areas, and aircraft maintenance facilities). The design work was performed in the U.S. by MEAPO and the construction was performed by Bechtel and Saudi Arabian contractors. Unfortunately, once a project was tasked by CINCCENT to MEAPO on behalf of NAVCENT, follow-up interfaces between MEAPO and NAVCENT were poor. NAVCENT evaluated the design work as marginal with numerous errors. Extensive field modifications were required in many cases. Additionally, MEAPO did not keep its customer, NAVCENT apprised of progress or problems.

RECOMMENDATION: Establish better coordination with MEAPO on future projects. NAVCENT should assign a liaison officer to interface with the CINC's CCA.

CATEGORY: CINCCENT INTERFACE

SUB CATEGORY: CEC/SEABEE COMMUNITY VISIBILITY IN CINCCENT  
ACTIVITIES

PROBLEM/ISSUE/LESSON: CEC/Seabee community lacks visibility in the CINCCENT AOR, and places at risk its involvement in future wartime missions.

DISCUSSION: Other Services dedicate significant effort to being totally involved in exercises and war planning activities of each of the CINCs. Detailed training in CINC activities and organizations is required for certain officers of the other Services seeking to be promoted to senior rank. As a result, not only do other Services (and specific elements of the Services) ensure themselves visibility, but also a wartime mission by familiarity gained through exercise participation.

In operation Desert Storm/Desert Storm, NCF involvement was aided significantly by a few key individuals on the I MEF (MARCENT) Staff, who had in prior years built up personal knowledge of and confidence in CEC/Seabee capabilities and advocated a strong NCF role. In another theater, and another time with different players, the lack of NCF visibility at the CINC level could well result in a diminished NCF role.

RECOMMENDATION: The CEC/Seabee Community should dedicate increased effort to each CINC and, as appropriate, to each CINC's Navy and Marine Corps component commander in order to: ensure the appropriate parties of the CINC's organization are and continue to be clearly aware of CEC/Seabee community capabilities; make recommendations for and increase the involvement of NCF/Seabees in the early stages of war plans; secure billets on the CINC's staff for CEC/Seabee community personnel to better serve the CINC and indirectly represent interests of the CEC/Seabee community.

ITEM  
NUMBER

APPENDICES

- 54 A. OPNAV Seabee Assessment Team Tasking Letter
- 55 B. Significant Events Chronology
- 56 C. Amazing Construction Statistics
- 57 D. Terms of Reference (TOR) on U.S. Marine Corps and U.S. Navy Employment of Naval Construction Force Units in Support of MAGTF Operations
- 58 E. USCINCCENT Organization
- 59 F. COMUSMARCENT Organization
- 60 G. Third Naval Construction Regiment Organization
- 61 H. COMUSNAVLOGSUPPORT Command Relationships for Logistics Sites
- 62 I. COMUSNAVCENT/NAVLOGSUPPORT/ACOS Engineering Department Organization
- 63 J. Government of Japan Indefinite Time Delivery Contract (ITDC) Procedures
- 64 K. Deployed Naval Construction Force Units
- 65 L. NCF SWA Deployment Locations as of 24 FEB 91
- 66 M. NCF Combat Support Locations as of 24 FEB 91
- 67 N. NCF Employment Plan
- 68 O. Seabee Reserves Recalled to Active Duty
- 69 P. Monthly Reserve Manpower Summary
- 70 Q. Table of Acronyms





DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
WASHINGTON, DC 20350-2000

IN REPLY REFER TO  
17 March 1991

From: Chief of Naval Operations (OP-44)  
To: OPNAV SEABEE Assessment Team

Subj: AFTER-ACTION ASSESSMENT OF NAVAL CONSTRUCTION FORCE  
(SEABEES) EMPLOYMENT IN OPERATION DESERT SHIELD/STORM

1. The Chief of Naval Operations (OP-44) desires a top-down assessment of SEABEE capabilities in support of contingency operations. Operation Desert Shield/Storm (ODS) presented a unique opportunity to evaluate all aspects of SEABEE employment doctrine, military capabilities, mobility, communications, reserve readiness, and logistic support.

2. To accomplish this assessment, you have been selected as a member of a small team of top-notch military and civilian experts to visit deployment sites in Saudi Arabia and other selected locations to gather timely, pertinent information before key players are lost to other assignments. I am particularly interested in unit and host commander's assessments of SEABEE capabilities, sustainability, and our current Required Operational Capabilities (ROCs) and Projected Operational Environments (POEs). Pertinent information would most desirably be obtained by interviews with key players at the command, staff, and company level. Information gathered is to be at the "macro" level and is not intended to duplicate or supersede existing lessons learned procedures. After review, the information will be used by OPNAV to determine future Naval Construction Force employment doctrine, size, composition, and equipment. Information gathered will affect both active and reserve units.

3. With this in mind, I request your whole hearted support of this tasking. A quality assessment will make a significant contribution toward our continuing objective of providing the Navy/Marine Corps team with the finest contingency construction and maintenance capability in the world...the Navy SEABEES.

P. W. DRENNON

Rear Admiral, CEC, U.S. Navy  
Director, Shore Activities Division

Copy to:  
CAPT Ferriter  
CAPT Marlay  
CAPT Dempsey  
CAPT Winter  
EQCM Hart  
Mr. McCully

### SIGNIFICANT EVENTS CHRONOLOGY

Significant events in support of Operation Desert Shield/Storm.

<u>DATE</u>	<u>EVENT</u>
02 AUG 90	* Iraq invades Kuwait.
07 AUG 90	* NCF directed to deploy units to Operation Desert Shield.
17 AUG 90	* First NCF personnel arrive in Saudi Arabia.
20 AUG 90	* CBUs 411 and 415 arrive as part of Fleet Hospital 5 in Al Jubayl, Saudi Arabia.
28 AUG 90	* CBPAC Forward Deployed; operational in Al Jubayl, Saudi Arabia. * NMCB-4 and NMCB-5 Air Detachments arrive. * Project work commences.
04 SEP 90	* Fleet Hospital 5 operational.
10 SEP 90	* RCBC Port Hueneme partially recalled. 59 men report to CBC Port Hueneme, CA for packing of TA-01 for shipment to Saudi Arabia.
12 SEP 90	* NMCB-7 Air Detachment arrives Al Jubayl.
14 SEP 90	* NMCB-40 Air Detachment arrives Al Jubayl.
18 SEP to 18 OCT 90	* Main Bodies and Sea Echelons of NMCBs 4, 5, 7, and 40 arrive in Saudi Arabia. Deployment of NCF into theater complete.
25 SEP 90	* Individual recalled reservists arrive in theater to augment NAVCENT/USNAVLOGSUPFOR.
26 SEP 90	* First increment of PWC Subic reserve augment (150 men) arrive at Subic Bay, Republic of Phillipines (R.P.).
05 OCT 90	* Second increment of PWC Subic reserve augment (100 men) arrive at Subic Bay, Republic of Phillipines.
20 NOV 90	* NMCB-23 main body arrives on Guam.
07 DEC 90	* NMCB-74 Bahrain, relieves NMCB-7 at Shaikh Isa Air Base, Bahrain.
08 DEC 90	* NMCB-1 detachments arrive to augment NMCB-5 (100 men) and NMCB-40 (100 men).

13 DEC 90 \* CBPAC Forward Deployed disestablished.  
THIRD/NCR assumes operational control of NMCBs  
4, 5, 40, and 74.

14 DEC 90 \* NMCB-74 relocates to Mishab, Saudi Arabia.

17 DEC 90 \* NMCB-24 relieves NMCB-4 at Al Jubayl, Saudi  
Arabia.

06 JAN 91 \* NMCB-5 Main (300 men) relocates to Kibrit,  
Saudi Arabia.

10 JAN 91 \* RCBCEN Gulfport was partially recalled and 66  
men reported to CBC Gulfport, MS.

13 JAN 91 \* NAVLOGSUPFOR public works augment detachment  
(150 men reconstituted from PWC Subic) arrives  
in Bahrain.

16 JAN 91 \* NAVLOGSUPFOR Public Works Personnel deployed  
to FLSSs at Jeddah, Saudi Arabia: ABU DHABI  
and United Arab Emirates.

17 JAN 91 \* Air War commences.

21 JAN 91 \* Public Works Personnel from NAVLOGSUPFOR  
deploy to FLSSs at Hurghada, Egypt.

23 JAN 91 \* NMCB-16 main body arrives in Puerto Rico.

25 JAN 91 \* CBHU-22 arrives as part of Fleet Hospital 6 in  
Bahrain.

31 JAN 91 \* CBHU-20 arrives as part of Fleet Hospital  
15 in Al Jubayl, Saudi Arabia.

JAN 91 \* Month of January dedicated to building and  
maintaining East-West and North-South Main  
Supply Routes (MSRs) in Northern Saudi Arabia.

02 FEB 91 \* NMCB-24 deploys 350 man detachment to  
Al Khanjar, Saudi Arabia.

04 FEB 91 \* NMCB-5 Main relocates to Al Quarrah, Saudi  
Arabia.

05 FEB 91 \* NCFSU-4 detachment arrives in Al Jubayl, Saudi  
Arabia for custody and maintenance of casualty  
replacement TOA.

05 FEB 91 \* Fleet Hospital 6 becomes operational.

09 FEB 91 \* 120 men of NMCB-1 detachments depart Saudi  
Arabia

FEB 91

- \* Month of February dedicated to:
- \* NCF builds two C-130 airstrip at Al Khanjar, Saudi Arabia.
- \* NCF builds one C-130 airstrip at Al Quarrah, Saudi Arabia.
- \* NCF builds Remote Piloted Vehicle (RPV) airstrip at Al Quarrah, Saudi Arabia.

11 FEB 91 \* Fleet Hospital 11 becomes operational.

24 FEB 91 \* Ground War commences.

26 FEB 91 \* 75 man NCF detachment enters Kuwait to construct MEF headquarters and repair damaged Al Jaber airport.

27 FEB 91 \* NCF assumes responsibility for maintaining a portion of the MSRs in Kuwait.

28 FEB 91 \* Hostilities cease.

03 MAR 91 \* The remaining 80 men of NMCB-1 detachments depart Saudi Arabia.

14 MAR 91 \* NMCB-40 departs Saudi Arabia.

28 MAR 91 \* Remaining PWC subic reserve augment personnel depart Subic Bay, Republic of Phillipines for CONUS.-

11 APR 91 \* NMCB-5 departs Saudi Arabia.

AMAZING CONSTRUCTION STATISTICS  
NAVAL CONSTRUCTION FORCE  
AS OF APR 91

ROAD MAINTENANCE

- 200 MILES OF UNPAVED FOUR LANE MAIN SUPPLY ROUTES/ACCESS ROADS.

AIRCRAFT SUPPORT FACILITIES

RUNWAYS: (UNPAVED)

- 2 - 6,000' X 150' (C-130) (BUILT FROM VIRGIN DESERT)
- 2 - 6,000' x 150' (C-130) (REGARDED AND MAINTAINED EXISTING)

AIRCRAFT PARKING: 7.0 MILLION SF SITE PREP/AM-2 MATTING

- 915,000 SF JUBAYL NAF
- --- 140,000 SF PARKING
- --- 3900' X 72' TAXIWAY
- 2 - 150' X 150' VTOL PADS
- 500,000 SF SHAIKH ISA
- 1,400,000 SF TANIJIB
- 2,400,000 SF MISHAB/DESERT LOCATION
- 1,000,000 SF AL KHANJAR
- 150,000 SF AL-QARAAH RPV SITE
- MOVED 2.0 MILLION CY OF FILL TO PREPARE SITES

HANGARS (W/CONCRETE DECKS):

- 8 - K-SPANS (5,000 SF EACH)
- 4 - CLAMSHELL BLDG (9,500 SF EACH)

AMMUNITION SUPPLY POINTS: 4

- 10.0 MILLION SF TOTAL AREA
- 1.3 MILLION CY OF FILL MOVED
- STORE OVER \$2.0 BILLION OF ORDNANCE

MEDICAL FACILITIES: 4

- TOTAL BED CAPACITY 1,600
- SITE PREP 2 FLEET HOSPITALS (1,000 BEDS)
- 1 ARMY FIELD HOSPITAL (400 BEDS)
- 1 AEROMEDICAL EVACUATION CENTER (200 BEDS)

GALLEYS: TOTAL FEEDING CAPACITY 75,000

- 6 - 2,500 MAN GALLEY
- 6 - 5,000 MAN GALLEY
- 2 - 15,000 MAN GALLEY

**CAMPS: TOTAL CAPACITY 42,500 PEOPLE**

- 3,500 JUBAIL NAF
- 3,000 KING ABDUL AZIZ
- 4,000 SHAIKH ISA
- 4,000 MISHAB
- 15,000 II. MEF BEDDOWN
- 7,000 JUBAIL PORT
- 1,000 3RD MAW HQ
- 500 KIBRIT
- 500 AL QARAAH

**ENEMY PRISONER OF WAR COMPOUND: 1**

- 40,000 MAN CAPACITY

**BUILDINGS: 4,945**

- 4,100 STRONGBACK TENTS
- 760 SWA HUTS
- 85 GAURD TOWERS (METAL, WOOD, SCAFFOLD)
- 3200 TENT SLABS

**MISCELLANEOUS WORK:**

- DEFENSIVE BARRIERS
- --- 2,000 STEEL HEDGEHOGS/TETRAHEDRONS
- --- 500 - 4' X 8' X 2' CONCRETE TANK BARRIERS
- DRILLED 2 WATER WELLS
- BUILT 4 MEF COMMAND POSTS (REAR AND FORWARD)

**MATERIALS USED:**

- 7.7 MILLION BF OF LUMBER
- 93,000 SHEETS OF PLYWOOD
- 110,000 LF PVC PIPE
- 1.4 MILLION LF (262 MILES) ELECTRICAL WIRE
- 53,000 CY CONCRETE
- 255,000 CY SELECT FILL
- EST. MATERIAL EXPENDITURES OF 18 MILLION

TERMS OF REFERENCE (TOR)  
ON  
U.S. MARINE CORPS AND U.S. NAVY  
EMPLOYMENT OF NAVAL CONSTRUCTION  
FORCE UNITS IN SUPPORT OF MAGTF OPERATIONS  
(UPDATE AND CONTINUANCE, JUNE 1988)

Introduction. In June 1987, the Terms of Reference (TOR) was placed into effect under the signatures of LTG J. J. Went, USMC, DCOS (I&L) and VADM T. J. Hughes, Jr., USN, DCNO (Logistics).

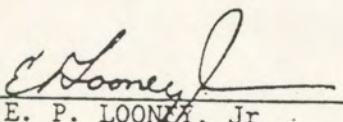
Purpose. The purpose of the TOR was to enhance NCF support of MAGTF operations. Specific tasks were presented, responsibilities assigned, timetables provided, and mutual concerns stated. The purpose of this TOR update and continuance is to report progress and to reaffirm commitment for continued progress.

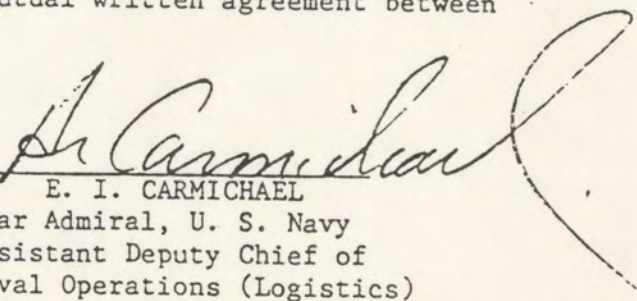
Objective. The overall objective remains to achieve a coordinated program to ensure the NCF capabilities are utilized to their full potential in support of the MAGTF. The Navy and Marine Corps must continue to work closely together to coordinate/resolve matters of mutual concern.

Status. Progress has been made in all areas of mutual concern as shown in the attachment to this TOR update. Increased emphasis is required in each area to achieve the overall objective.

Tasking. Specific tasks were identified in the attachment to the TOR. These tasks remain valid. It is imperative that cognizant MAGTF/NCF commands work closely together to staff the areas of mutual concern at the MEF level. The Deputy Chief of Staff for Installations and Logistics Department; Director of Logistics, Plans, Policies and Strategic Mobility Division (LP) and Deputy Chief of Naval Operations for Logistics; Director, Shore Facilities, Planning and Programming (OP-44) will be kept informed of progress and will work through the Fleets and Fleet Marine Forces to facilitate attaining the overall objective.

Effective date. This TOR (update and continuance) is effective immediately and shall remain in effect until amended by mutual written agreement between the Marine Corps and the Navy.

  
E. P. LOONEY, Jr.  
Major General, U. S. Marine Corps  
Director of Logistics, Plans, Policies  
and Strategic Mobility Division

  
E. I. CARMICHAEL  
Rear Admiral, U. S. Navy  
Assistant Deputy Chief of  
Naval Operations (Logistics)

21 June 88  
Date  
Attachment

21 June 88  
Date

TERMS OF REFERENCE  
(Update and Continuance, June 1988)

Joint Navy/Marine Corps Tasks

Task 1. NCF UNITS OPCON TO MAGTF

LEAD SVC: Navy (OP-04)

PRODUCT: NCF OPCON

COMPL DATE: 21 June 1988

STATUS: OPNAV concurs that designated NCF units be OPCON to MAGTF

ACTION REQUIRED: OPNAV letter to HQMC

Task 2. NCF SUSTAINABILITY

LEAD SVC: Marine Corps (LP)

PRODUCT: NCF sustainability IAW MEF requirements

COMPL DATE: On going

STATUS: a. 60 day sustainability requirements identified

b. Resupply items via MAGTF supply

c. Navy agrees to POM for deficiencies

ACTION REQUIRED: a. Navy POM for accompanying supplies to 60 days

b. Address resupply after 60 days

Task 3. COMMAND RELATIONSHIP

LEAD SVC: Marine Corps (PP&O, LP)

PRODUCT: Organization relationships

COMPL DATE: 1 September 1988

STATUS: MAGTF commander should organize to best meet his mission

ACTION REQUIRED: Marine Corps letter to OPNAV in response to Task 1 letter above.

Task 4. NCF EMPLOYMENT

LEAD SVC: Marine Corps (LP)

PRODUCT: Employment planning

COMPL DATE: Ongoing

STATUS: a. I MEF/1st RNCR Moving out smartly on OPLAN 1021

b. Fleets reviewing base case set of OPLANS

ACTION REQUIRED: MEFs/NCF jointly determine base case employment under Fleet/Fleet Marine Force direction and program TPFDD requirements.

Task 5. CONSTRUCTION MATERIAL

LEAD SVC: Navy (FAC-06)

PRODUCT: Estimate of construction materials (Class IV, A & B)

COMPL DATE: Dec 88

STATUS: I MEF/1st RNCR almost complete with draft on OPLAN 1021

ACTION REQUIRED: a. MEFs/NCF jointly develop MTOs in support of employment planning.

b. Other OPLANS to follow under Fleet/Fleet Marine Force direction.



Task 6. PORTS OF EMBARKATION

LEAD SVC: Navy and Marine Corps

PRODUCT: POE locations

COMPL DATE: September 1989

STATUS: AFOE lift study in progress

ACTION REQUIRED: a. Complete assessment of strategic lift requirements  
(Including consideration of containerization)  
b. Evaluate and assign POEs accordingly

Task 7. CONUS TRANSPORTATION PLAN

LEAD SVC: Navy (OP-40)

PRODUCT: CONUS transportation plan

COMPL DATE: September 1990

STATUS: a. NMCBs flow through CBCs  
b. NCF is prototype for TCAIMS

ACTION REQUIRED: Complete movement information system (TCAIMS) implementation

Task 8. EQUIPMENT COMPATIBILITY

LEAD SVC: Navy and Marine Corps (MCRADC)

PRODUCT: Equipment compatibility

COMPL DATE: Ongoing

STATUS: a. Reviewed NMCB/ESB (TOA/TE)  
b. Initial draft report is being prepared on common items  
(available August 88)

ACTION REQUIRED: a. Evaluate common items  
b. Maximize compatibility  
c. Review RDT&E programs for commonality  
d. Review and revise joint procurement  
e. Implement results

Task 9. TRAINING AND EXERCISE COORDINATION

LEAD SVC: Navy and Marine Corps

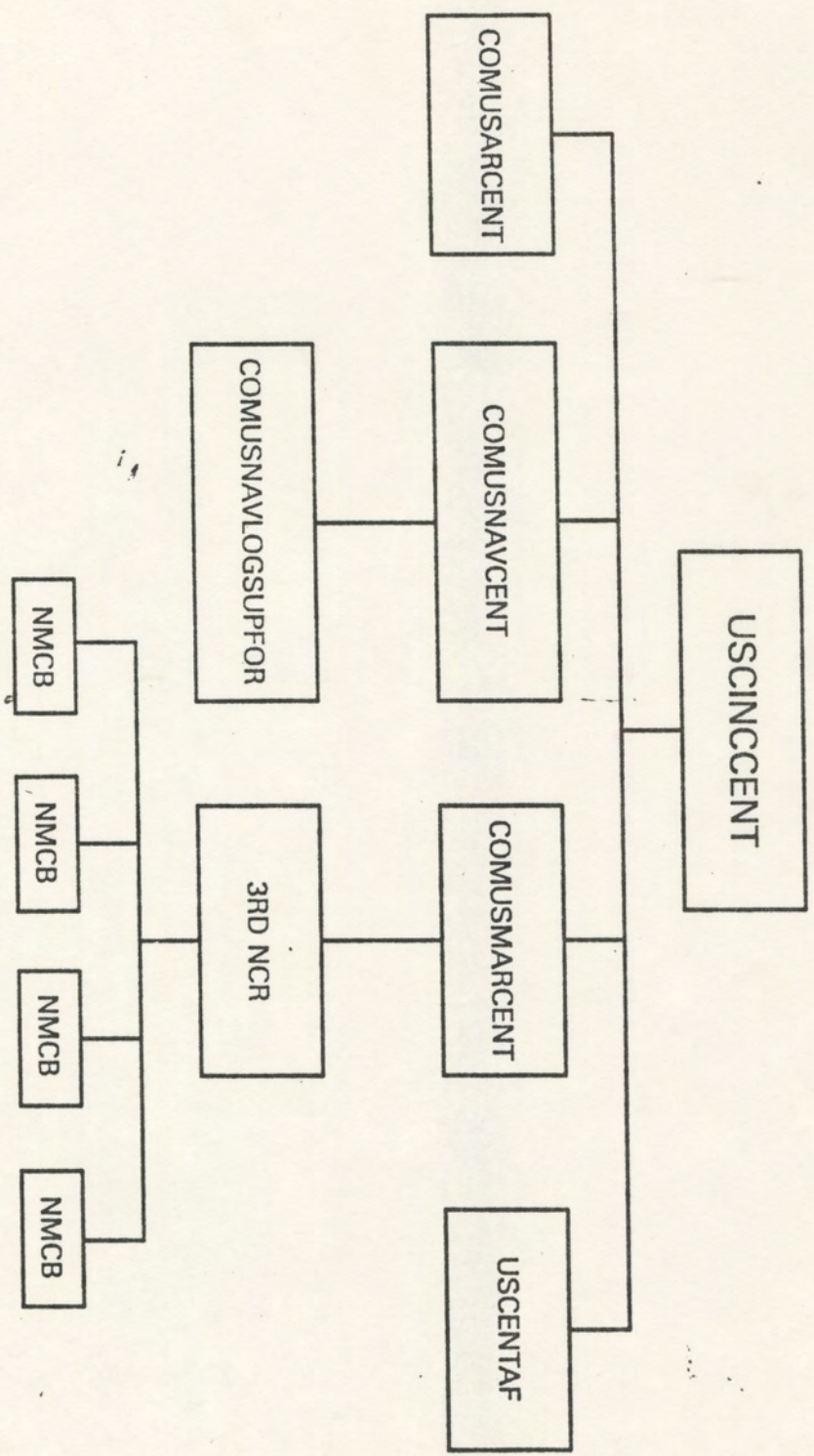
PRODUCT: Training and Exercise Coordination

COMPL DATE: Ongoing

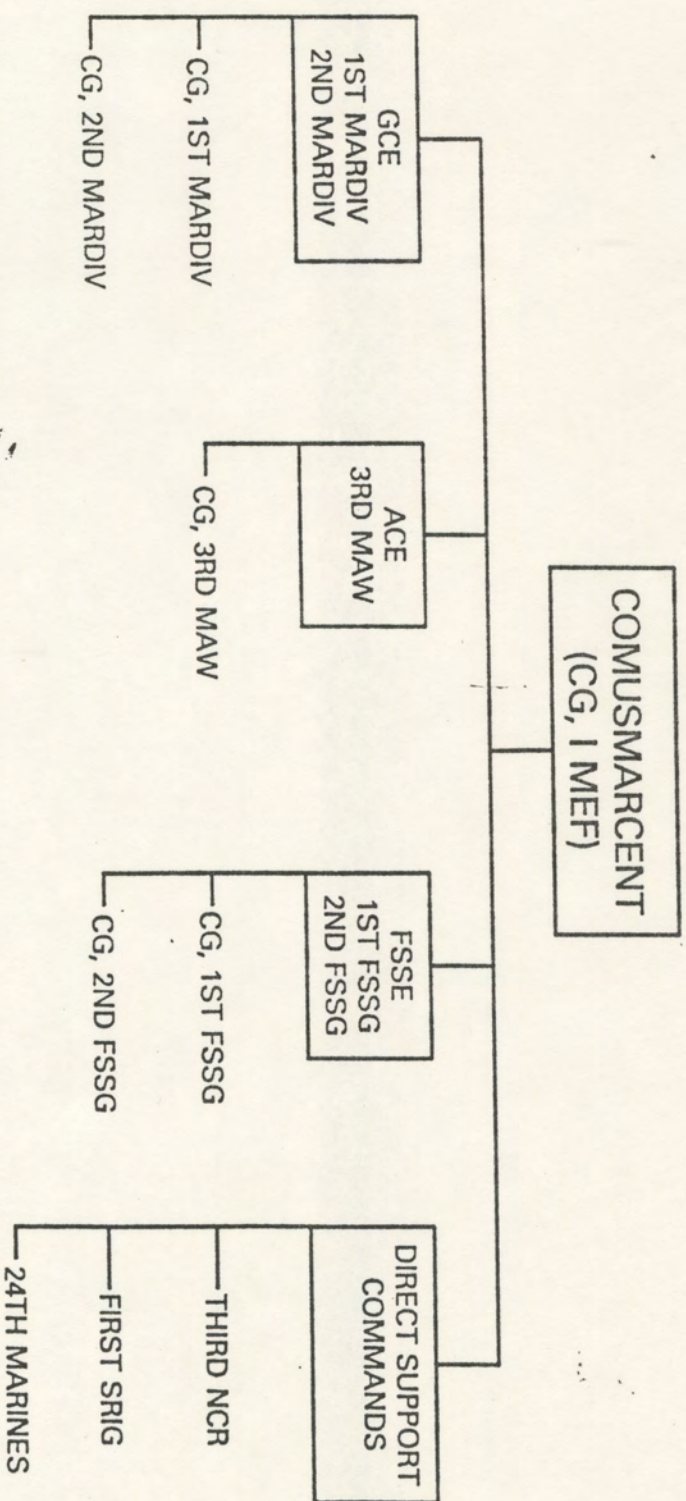
STATUS: a. NCF & MAGTF joint involvement in CPXs & FEXs (e.g.  
Gallant Knight/Gallant Eagle and Team Spirit 88)  
b. JCS Sponsored exercises (e.g. Wintex/Cimex 89 and Proud  
Eagle 90)  
c. Joint logistics exercise (e.g. LOGEX 88)

ACTION REQUIRED: Plan and Exercise jointly at every opportunity

# USCINCCENT ORGANIZATION

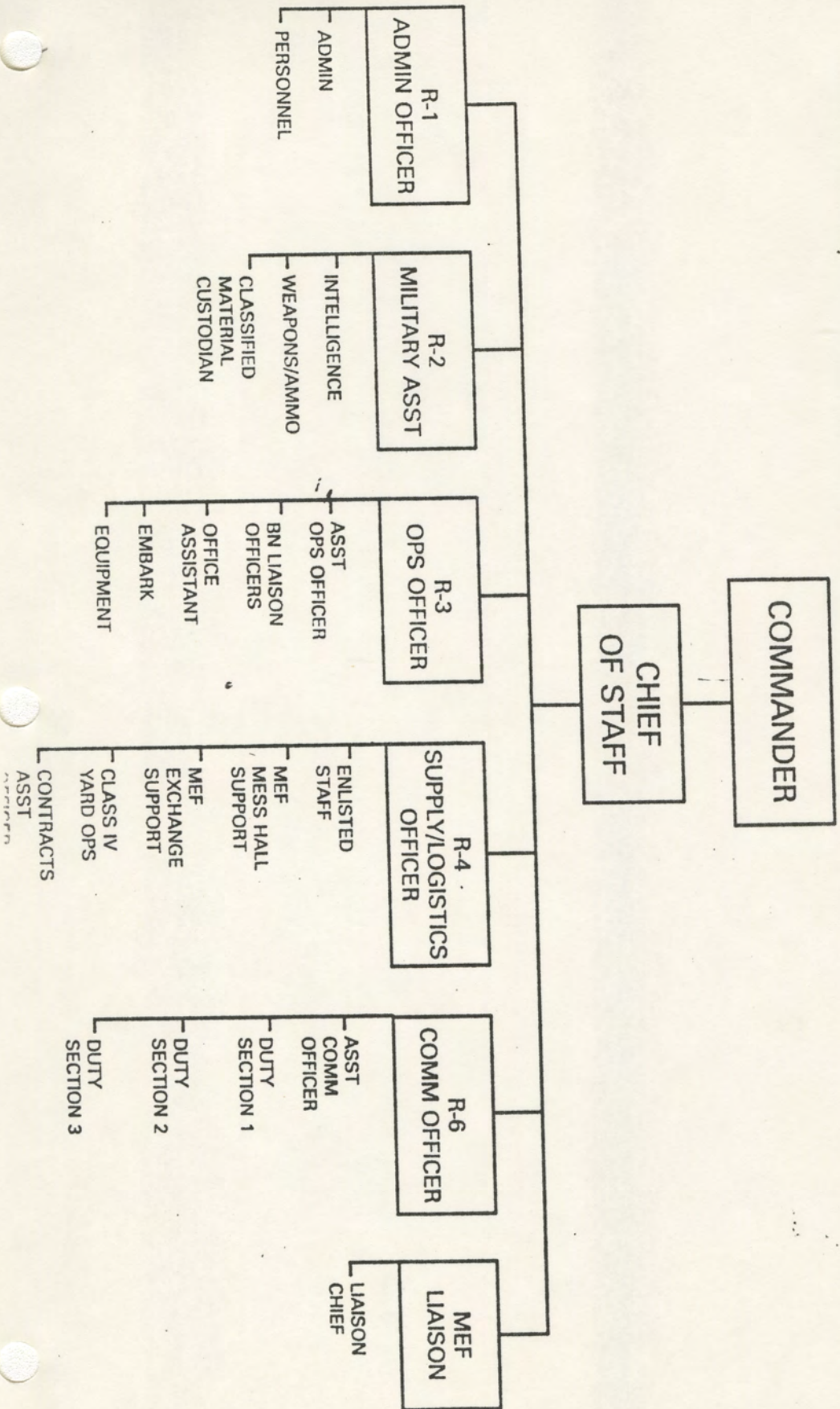


# COMUSMARCENT ORGANIZATION



GCE = GROUND SUPPORT ELEMENT  
 ACE = AIR COMBAT ELEMENT  
 FSSG = FORCE SERVICE & SUPPORT GROUP  
 NCR = NAVAL CONSTRUCTION REGIMENT  
 SRIG = SURVEILLANCE, RECONNAISSANCE & INTELLIGENCE GROUP

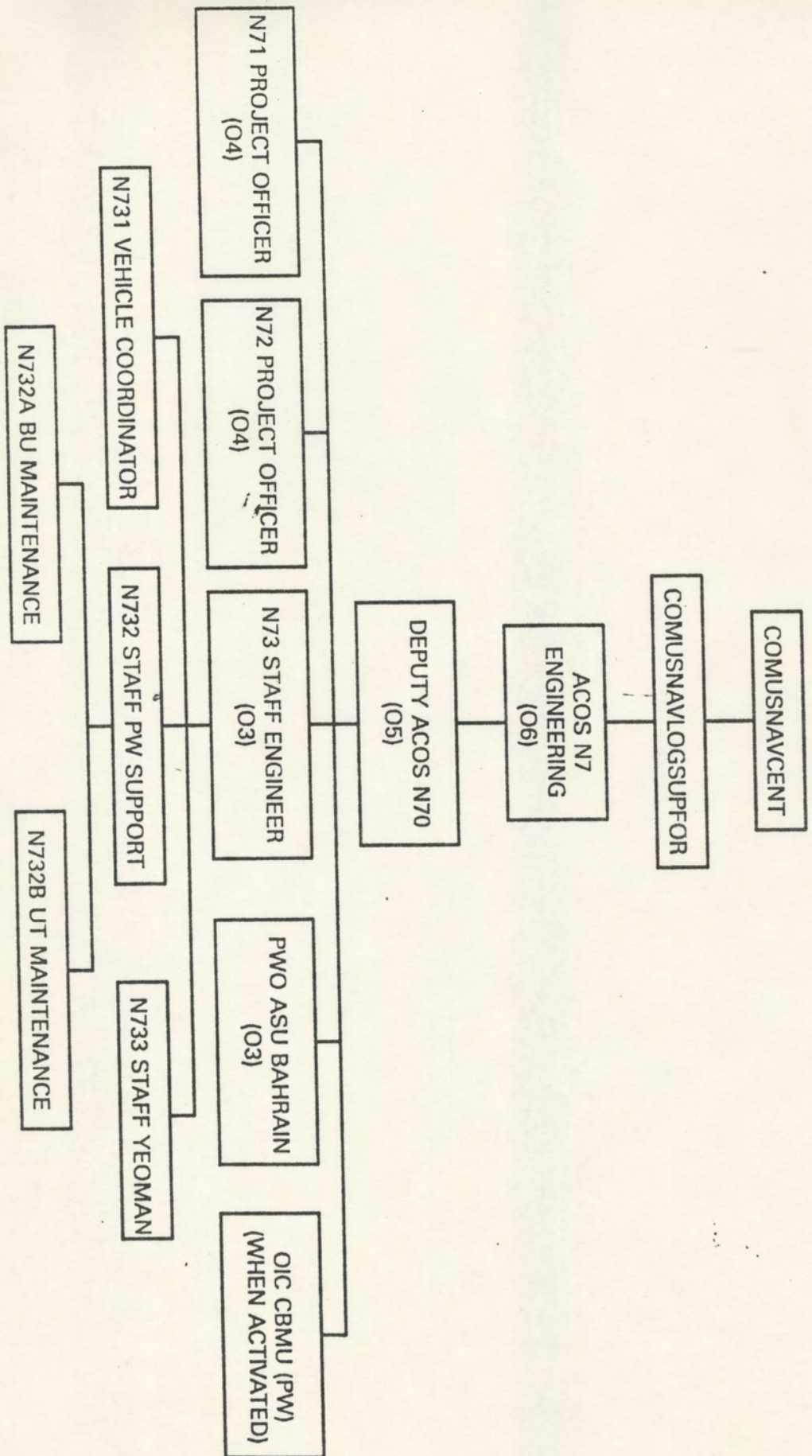
# THIRD NAVAL CONSTRUCTION REGIMENT ORGANIZATION



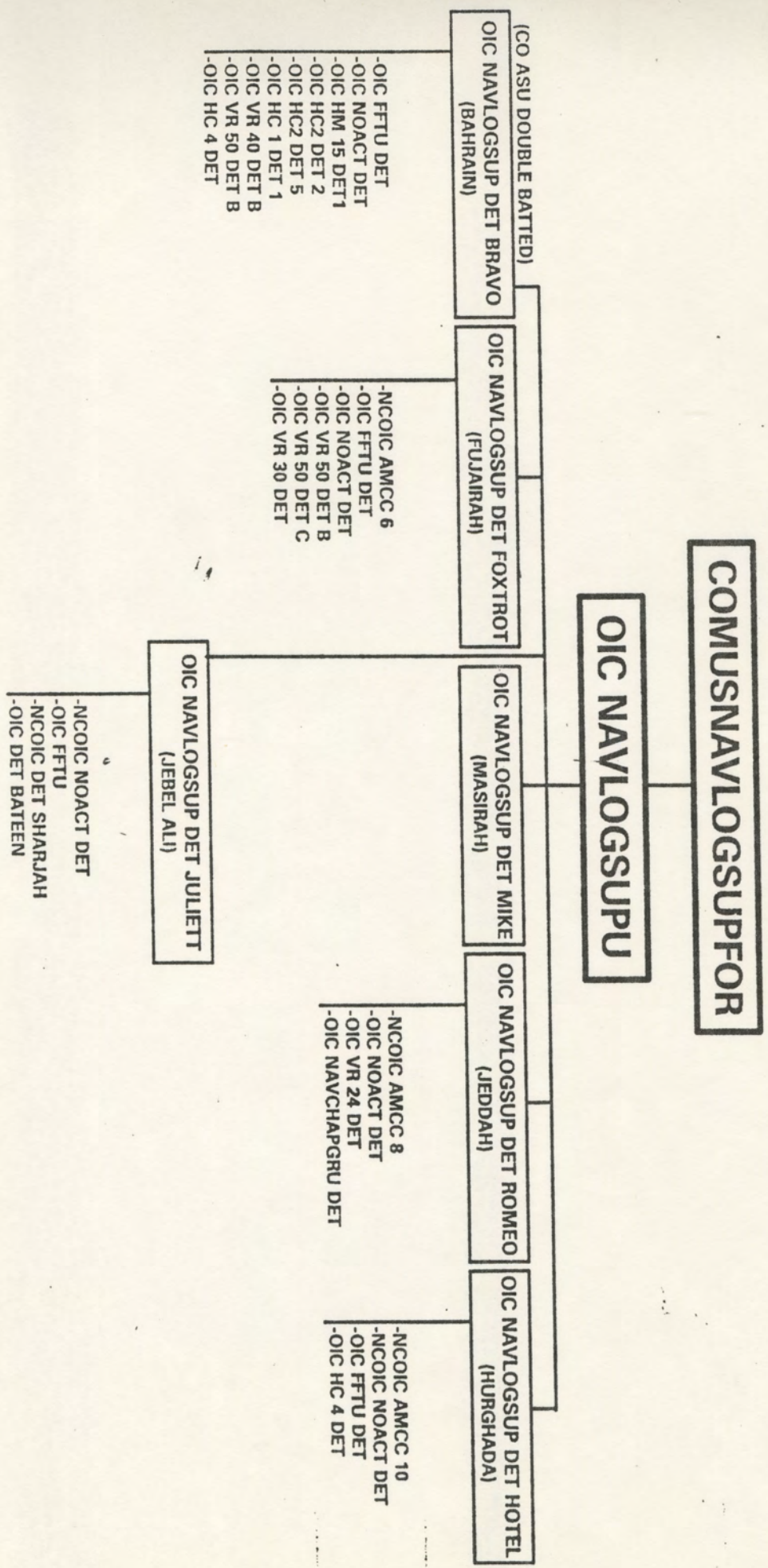
# COMUSNAVCENT/COMUSNAVLOGSUPFOR

## ACOS ENGINEERING DEPARTMENT ORGANIZATION

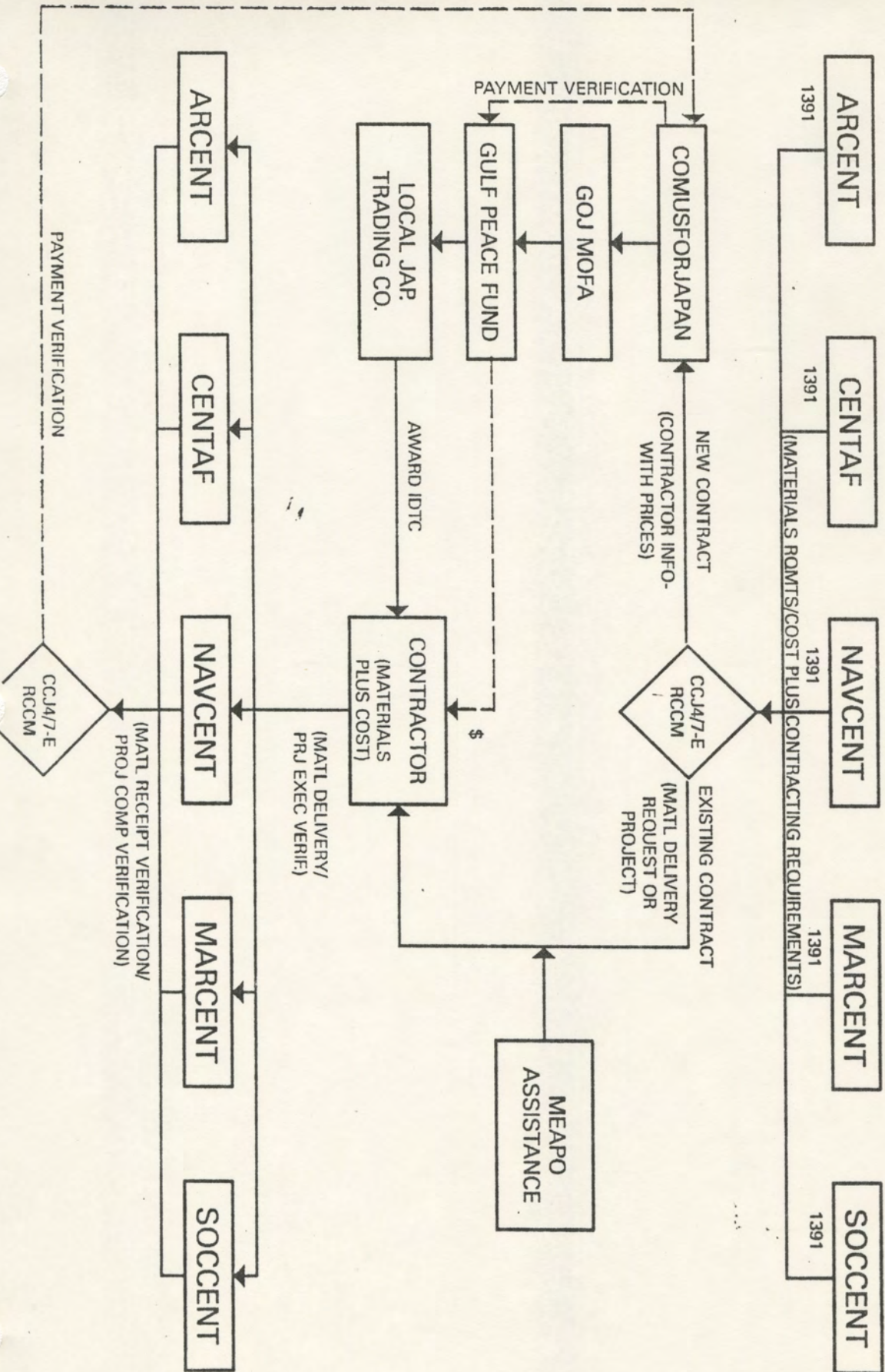
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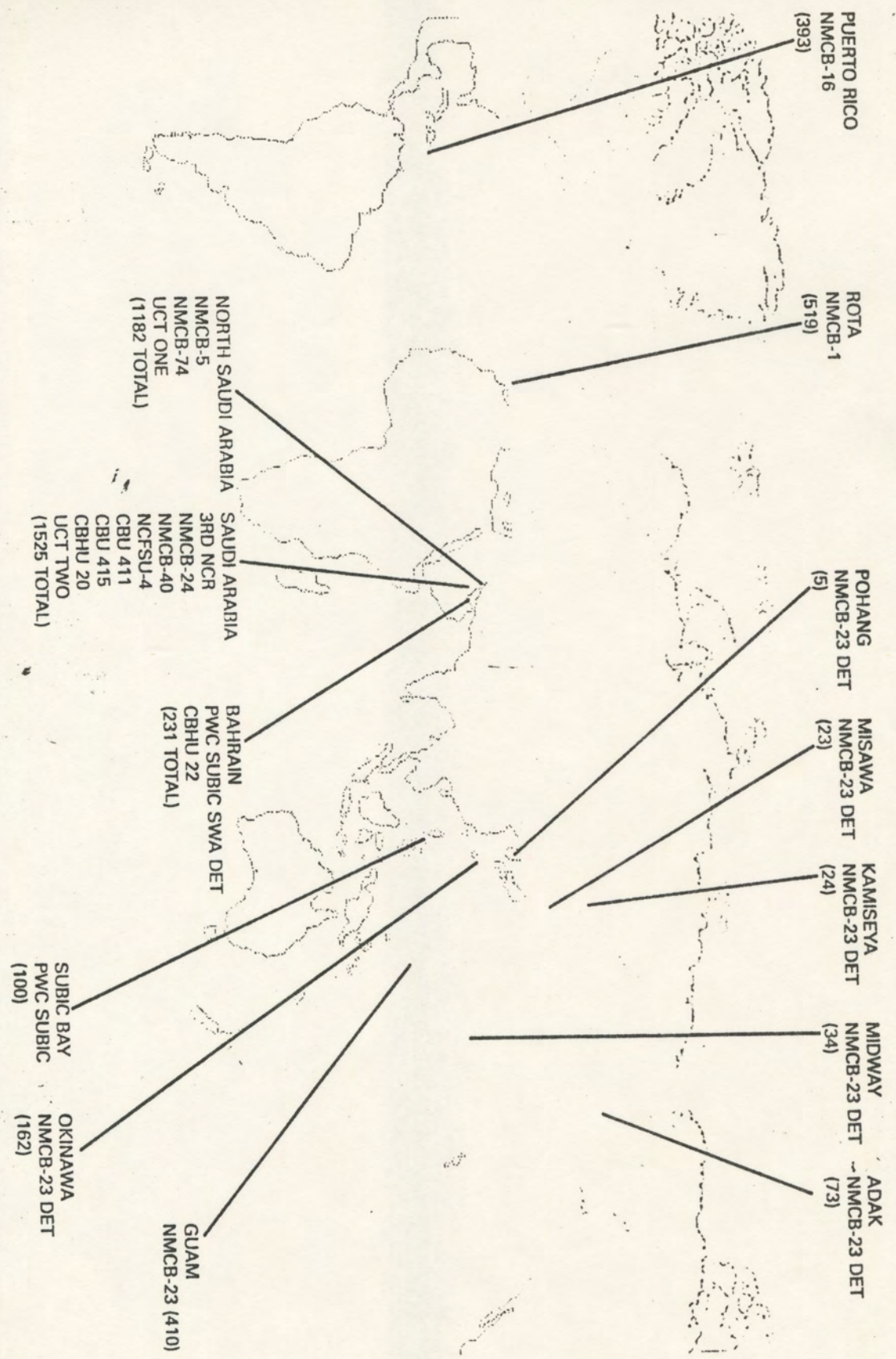
# COMUSNAVLOGSUPFOR COMMAND RELATIONSHIPS FOR LOGISTICS SITES



# GOVERNMENT OF JAPAN INDEFINITE TIME DELIVERY CONTRACT PROCESS



# DEPLOYED NAVAL CONS, RUCTION FORCE UNITS

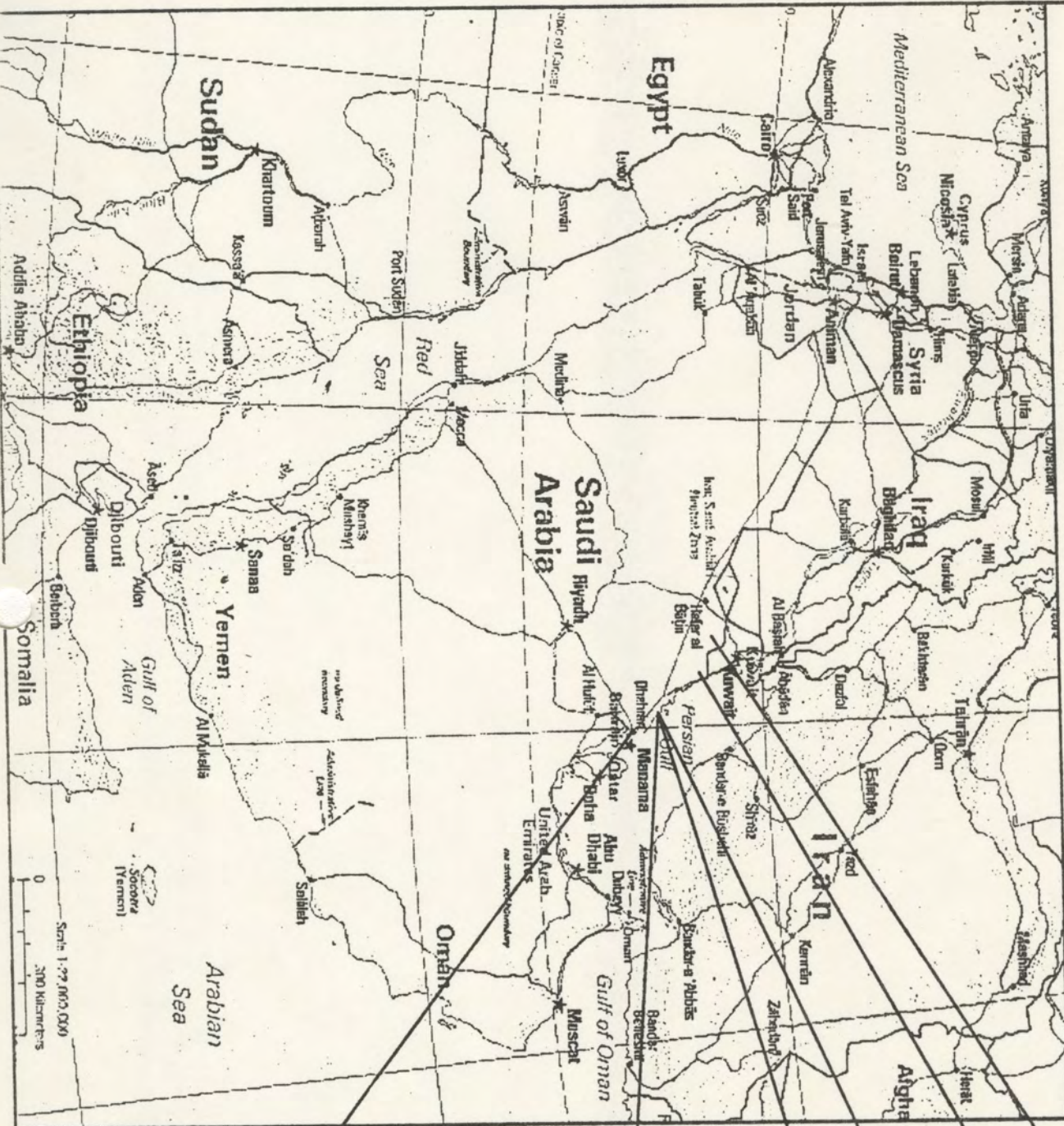


TOTAL: 4681

AS OF: 24 FEB 91  
 UPDATED AS REQUIRED  
 SOURCE: OP-44



# NCF SWA DEPLOYMENT LOCATIONS (24 FEB 91)



- TOTAL: 2938
- NMCB-5 (559)
- NMCB-74 OCT-ONE (623 TOTAL)
- NMCB-24 (696)
- NMCB-40 (569)
- CBU 411
- CBU 415
- 3RD NCR
- NCFSU-4
- UCT-TWO
- CBHU-20 (260 TOTAL)
- PWC
- SUBIC
- SWA DET
- CBHU-22 (231 TOTAL)



# NCF EMPLOYMENT PLAN

	1990			1991			1992						
	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
OKINAWA, R. I.													
GUAM, M. I.													
ROTA, SPAIN													
ROOSEVELT ROADS, P. R.													
SA - 1													
SA - 2													
SA - 3													
SA - 4													
CBPAC FD./ NCR													
SUBIC DET													
SWA DET													
SA DET													
CBC PORT HUENEME													
CBC GULF PORT													
NCF SU DET													
RNCF HQ													
31ST NCR													
20TH NCR													

USN UNIT       USNR UNIT

SEABEE RESERVE RECALLED  
TO ACTIVE DUTY  
(SEP 90 - MAR 91)

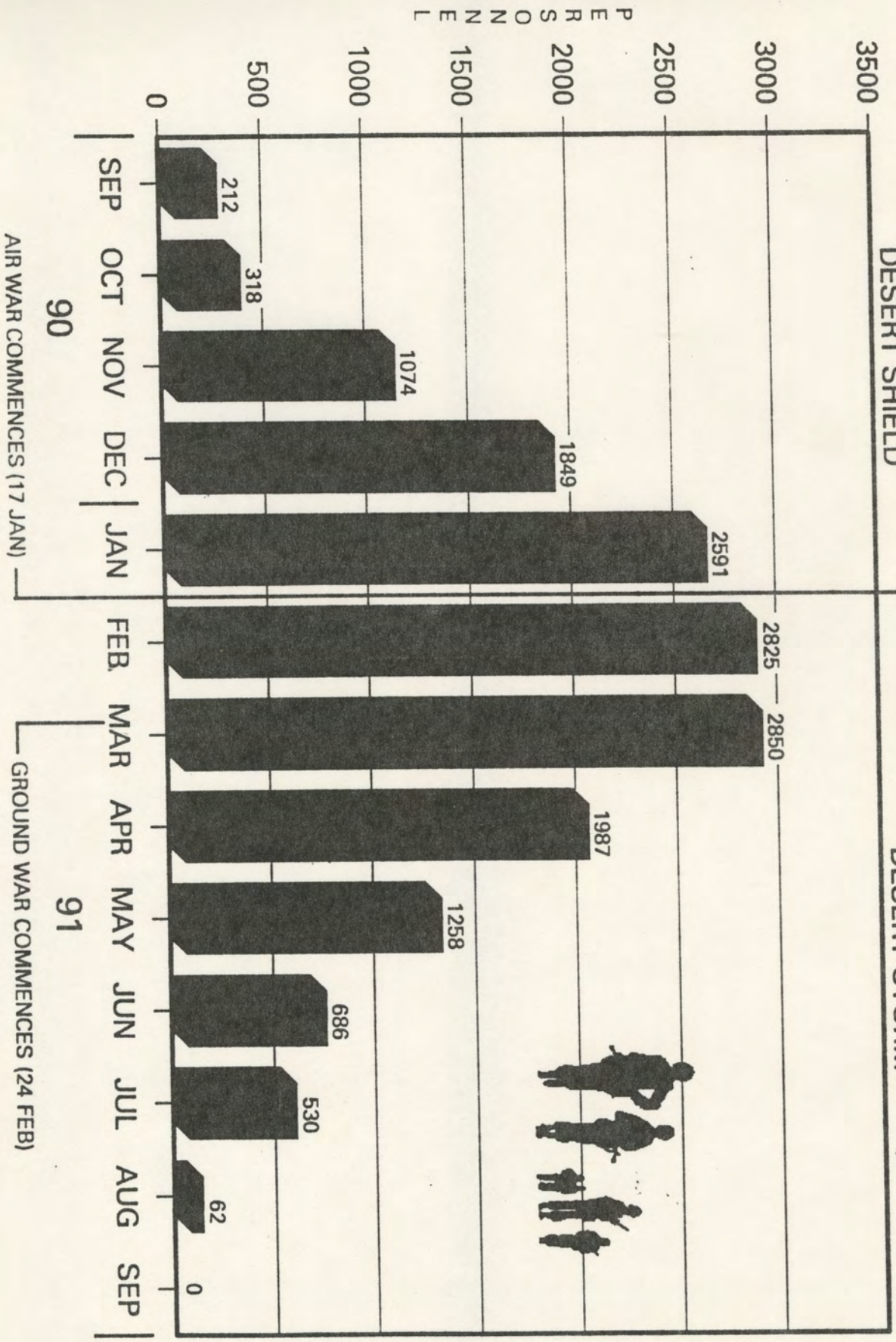
<u>UNIT NAME</u>	<u>DATE</u>	<u>NUMBER</u>	
PWC SUBIC BAY	09/19/90	152	
	10/05/90	102	
	11/26/90	1	
	02/13/91	<u>1</u>	256
CBC PT HUENEME	09/11/90	59	
	11/16/90	2	
	02/22/91	29	
	02/21/91	<u>4</u>	94
CBC GULFPORT	10/01/90	2	
	10/12/90	1	
	12/24/90	1	
	01/13/91	61	
	03/06/91	<u>4</u>	69
NAVFACWEST	10/01/90	<u>1</u>	1
EFD CHESLANT	09/19/90	<u>1</u>	1
EFD PAC	01/18/91	<u>1</u>	1
21ST RNCR	01/12/91	<u>1</u>	1
31ST RNCR	01/13/91	73	
31ST RNCR	01/18/91	<u>6</u>	79
FIRST BRIGADE	11/19/90	8	
	11/21/90	4	
	02/20/91	1	
	03/05/91	<u>9</u>	22
RNCFSU 4	01/13/91	<u>59</u>	59
3RD RNCR	12/05/90	<u>24</u>	24

RNMCB 12	01/04/91	1	
	02/20/91	47	
	03/06/91	<u>2</u>	50
RNMCB 23	11/06/90	39	
	11/16/90	700	
	12/08/90	<u>2</u>	741
RNMCB 24	12/05/90	<u>750</u>	750
RNMCB 16	01/01/91	9	
	01/04/91	405	
	01/12/91	9	
	01/19/91	7	
	03/06/91	<u>2</u>	432
RNMCB 13	02/20/91	44	
	03/06/91	<u>2</u>	46
CBHU 22	01/05/91	29	
	01/08/91	<u>56</u>	85
CBHU 20	01/19/91	26	
	01/20/91	<u>58</u>	84
CBHU 11	02/20/91	<u>1</u>	1
CBHU 9	02/20/91	2	
	03/03/91	<u>7</u>	9
20TH RNCR	02/28/91	<u>45</u>	<u>45</u>
GRAND TOTAL			<u>2,850</u>

# MONTHLY SEABEE RESERVE RECALL SUMMARY

DESERT SHIELD

DESERT STORM



## TABLE OF ACRONYMS

ACOS - Assistant Chief of Staff  
ACOSENGR - Assistant Chief of Staff for Engineering  
AIK - Assistance in Kind  
AOR - Area of Responsibility  
ASP - Ammunition Supply Points  
ASU - Administrative Support Unit

BAQ - Basic Allowance for Quarters  
BLDG - Building  
BUPERS - Bureau of Personnel

CBC - Construction Battalion Center  
CBHU - Seabee Hospital Unit  
CBLANT - Construction Battalions Atlantic  
CBPAC - Construction Battalions Pacific  
CBR - Chemical, Biological, and Radiological Outfitting  
CBMU - Construction Battalion Maintenance Unit  
CBU - Construction Battalion Unit  
CCA - Construction Contract Agent  
CEC - Civil Engineers Corps  
CENTCOM - Central Command  
CESE - Civil Engineer Support Equipment  
CESO - Civil Engineer Support Office  
CG - Commanding General  
CHESLANT - Chesapeake Branch, Atlantic Division, Naval Facilities  
Engineering Command  
CINCCENT - Commander in Chief, U.S. Forces Central Command  
CLASS IV - Construction Materials  
COMCBLANT - Commander, Construction Battalions Atlantic  
COMCBPAC - Commander, Construction Battalions Pacific  
COMM - Communications  
COMNAVRESFOR - Commander, Naval Reserve Force  
COMRNCF - Commander, Reserve Naval Construction Force  
COMUSNAVCENT - Commander, United States Navy Central Command  
COMUSNAVLOGSUPFOR - Commander, U.S. Naval Logistics Support Force  
CONUS - Continental United States  
COSAL - Consolidated Seabee Equipment Allowance List  
CPO - Chief Petty Officer  
CSO - Chief Staff Officer  
CY - Cubic Yard

DETS - Detachments  
DDS - Direct Deposit System  
DKC - Chief Disbursing Clerk  
DOD - Department Of Defense

EAC - Echelon Above Corps  
EASTERN - Eastern Asphalt and Mixed Concrete Company  
ECC - Equipment Classification Code  
EFD - Engineer Facilities Division  
EO - Equipment Operator

EPW - Enemy Prisoner of War  
EQUIPOS - Equipment Officers  
EQCM - Master Chief Equipmentman  
ERO - Equipment Repair Order

FEX - Field Exercise  
FH - Fleet Hospital  
FLSS - Forward Logistics Support Site  
FMF - Fleet Marine Force  
FSA - Family Separation Allowance

GOJ - Government of Japan

HMMVS - High Mobility Motorized Vehicle

ISA - Interservice Support Agreement  
ISO - International Standards Organization  
ITDC - Indefinite Time Delivery Contract

LAAW - Light Anti Tank Weapons  
LNO - Liaison Officer

MAGTF - Marine Air Ground Task Force  
MALC - Marine Ammunition Logistics Code  
MARCENT - Marine Forces, U.S. Central Command  
MEAPO - Middle East/Africa Project Office  
MEF - Marine Expeditionary Force  
MILCON - Military Construction  
MLO - Material Liaison Officer/Material Liaison Office  
MPS - Maritime Prepositioning Ship  
MRP - Maintenance and Repair Project  
MSR - Main Supply Route

NAF - Non-appropriated Funds  
NALC - Naval Ammunition Logistics Code  
NAVCENT - Naval Forces U.S. Central Command  
NAVCOMPT - Navy Comptroller  
NAVFACWEST - Navy Facilities Engineering Command West  
NAVLOGSUPFOR - Naval Logistics Support Force  
NAVMEDCOM - Naval Medical Command  
NAVFAC - Naval Facilities Engineering Command  
NCBC - Naval Construction Battalion Center  
NCF - Naval Construction Force  
NCFSU - Naval Construction Force Support Unit  
NCR - Naval Construction Regiment  
NMCB - Naval Mobile Construction Battalion  
NMPC - Naval Military Personnel Command  
NOD - Night Observation Device  
NR - Naval Reserve

ODS - Operation Desert Shield/Storm  
OIC - Officer in Charge  
O&M - Operations and Maintenance  
OP - Operations



OPNAV - Office of the Chief of Naval Operations Staff

OPLANS - Operations Plan

OPTEMPO - Operations Tempo

OPNAVINST - Chief Of Naval Operations Instructions

PAC - Pacific

PCS - Permanent Change of Station

PERSTEMPO - Personnel Tempo

PN - Personnellman

POE - Projected Operational Environment

PSD - Personnel Support Detachment

PWC - Public Works Center

PWRMS - Prepositioned War Reserve Material Stocks

RCBC - Reserve Construction Battalion Center

RCCM - Regional Contingency Construction Manager

RDT&E - Research, Development, Test and Evaluations

REDCOM - Readiness Command

RESCEN - Reserve Center

RNCF - Reserve Naval Construction Force

RNCR - Reserve Naval Construction Regiment

RNMCB - Reserve Naval Mobile Construction Battalion

ROC - Required Operational Capability

ROWPU - Reverse Osmosis Water Purification Unit

R.P. - Republic of Phillipines

RPV - Remotely piloted Vehicle

RTCH - Rough Terrain Cargo Handler

SASS - Standard Automated Supply System

SELRES - Selected Reservists

SORTS - Status of Resources and Training System

SU - Support Unit

SWA - Southwest Asia

TOA - Table of Allowance

TOR - Terms of Reference

TPFDD - Time Phased Force Deployment Data

TIT - Tactical Infantry Training

USMC - United State Marine Corps

USCINCCENT - United States Commander in Chief, Central Command

USNAVLOGSUPFOR - United States Naval Logistics Support Force

USNR - United States Naval Reserve

VSTOL - Vertical Short Take-off and Landing

VTOL - Vertical Take-off and Landing