NMCB-74
DEPLOYMENT COMPLETION REPORT

DEPARTMENT OF THE NAVY
U.S. NAVAL MOBILE CONSTRUCTION BATTALION SEVENTY-FOUR
F.P.O. MIAMI 34099-5021

3000
Ser/
15 Jun 91

From: Commanding Officer, Naval Mobile Construction Battalion SEVENTY-FOUR
To: Distribution

Subj: SUBMISSION OF DEPLOYMENT COMPLETION REPORT

Ref: (a) COMCBPAC/COMCBLANTINST 3121.1B
(b) COMCBPAC OPORDER 90-1

Encl: (1) Executive Summary
(2) Administration/Special Staff
(3) Training
(4) Operations
(5) Supply and Logistics
(6) Equipment
(7) Camp Maintenance
(8) Contingency Operations

1. Enclosures (1) through (8) are forwarded in accordance with reference (a).

2. In accordance with reference (b), Naval Mobile Construction Battalion SEVENTY-FOUR deployed to Camp Orr, Bahrain, and later to Camp Romeo Alpha Mike, Ra's Al Mish'ab, Saudi Arabia, during the period 04 December 1990 to 08 May 1991 with details deployed to ASU, Bahrain; Al Kibrit and Al Khafji, Saudi Arabia; and Suman Air Base, Bahrain.

3. Our deployment in support of Operations Desert Shield/Storm included a tactical mount-out transporting the full battalion 230 miles to Ra's Al Mish'ab in northeastern Saudi Arabia, approximately 30 miles south of the Kuwait border. Details maintained an expeditionary airfield in Al Kibrit, cleared and repaired roads just north of Al Khafji, Saudi Arabia, at the border area and into Kuwait, participated in joint task force deception tactics prior to the ground war, and assessed damages in Southern Kuwait for Marine Corps units.

4. Our construction program inluded over 24,000 direct labor mandays and in excess of $5.5 million of construction materials supporting over 50 different commands with contingency construction on 70 projects. Safety and quality goals were achieved with a remarkable low accident rate and high quality workmanship.

5. In this critical wartime deployment the battalion performed superbly in all aspects. In all our dealings with the Marine Corps and Allied Forces, the Seabees reestablished their name as a synonymous with quality and dependability in their "Can Do" spirit.

6. This report does not comply with length limitations of reference (a) due to the extensive amount of information to be shared on this unusual deployment.

W. P. FOGARTY

Distribution:
CNO (OP-446)
COMNAVFACENGCOM (CODE 06)
COMCBPAC (2 COPIES)
COMCBLANT (2 COPIES)
COM 31ST NCR
COM 20TH NCR
CECOS
CO, NMCB ONE
CO, NMCB THREE
CO, NMCB FOUR
CO, NMCB FIVE
CO, NMCB SEVEN
CO, NMCB FOUR ZERO
CO, NMCB ONE THREE THREE
CO, RNMCB TWENTY FOUR

EXECUTIVE SUMMARY

Enclosure (1)

HISTORICAL SUMMARY

03 DEC 90	AP DEPARTS GULFPORT, MS
04 DEC 90	AP ARRIVES SUMAN AIR BASE, BAHRAIN
05 DEC 90	TURNOVER WITH NMCB-7 BEGINS ESTABLISHED AL JUBAIL DET, AL JUBAIL, SAUDI ARABIA
06 DEC 90	ESTABLISHED DET ASU, ASU, AL MANAMA, BAHRAIN MB DEPARTS GULFPORT, MS
07 DEC 90	MB ARRIVES SUWAN AIR BASE, BAHRAIN
08 DEC 90	SEABEE CAMP TOM ORR TURNED OVER FROM NMCB-7 TO NMCB-74
14 DEC 90	PRE-ADVANCE PARTY SENT TO LAYOUT SEABEE CAMP ROMEO ALPHA MIKE (RAM), RA'S AL MISH'AB, SAUDI ARABIA
15 DEC 90	DET JUBAIL DISESTABLISHED AND MOVED TO RA'S AL MISH'AB TO CONSTRUCT SEABEE CAMP
15 DEC 90	ADVANCE PARTY ARRIVES CAMP RAM
15 - 22 DEC 90	MAINBODY RELOCATES TO CAMP RAM, RA'S AL MISH'AB, SAUDI ARABIA
17 DEC 90	DET ONE, SUMAN AIR BASE ESTABLISHED, SHIEK ISA, BAHRAIN
17 JAN 91	OPERATION DESERT STORM BEGAN
28 JAN 91	DET ASU DISESTABLISHED AND PERSONNEL JOIN MAIN BODY
14 FEB 91	DET KIBRIT ESTABLISHED
15 FEB 91	DET TROY DEPARTS CAMP RAM
21 FEB 91	DET TROY RETURNS
24 FEB 91	GROUND OFFENSIVE STARTS
28 FEB 91	DET KHAFJI DEPARTS CAMP RAM
02 MAR 91	CEASE FIRE DECLARED
03 MAR 91	DET KHAFJI RETURNS
15 MAR 91	DET ONE DISESTABLISHED
17 MAR 91	BATTALION HUMP DAY/ST PATRICK'S DAY PICINIC
03 APR 91	DET KIBRIT DISESTABLISHED
10 APR 91	RADM BOTTORFF, CHIEF OF CIVIL ENGINEERS, VISITS CAMP RAM BEGAN MOVING BATTALION TO SEABEE CAMP 13, AL JUBAIL, SAUDI ARABIA
12 APR 91	RETROGRADE DET FOR CAMP RAM ESTABLISHED
17 APR 91	MOVE TO CAMP 13 COMPLETE
22 APR 91	CAMP RAM RETROGRADE DET DISESTABLISHED
04 MAY 91	DELAYED PARTY ESTABLISHED
06 MAY 91	AP DEPARTS AL JUBAIL, SAUDI ARABIA
07 MAY 91	AP ARRIVES GULFPORT, MS
08 MAY 91	MB DEPARTS AL JUBAIL, MS
09 MAY 91	MB ARRIVES GULFPORT, MS
13 JUN 91	DELAYED PARTY DEPARTS AL JUBAIL, SAUDI ARABIA
14 JUN 91	DELAYED PARTY ARRIVES GULFPORT, MS

EXECUTIVE SUMMARY

Naval Mobile Construction Battalion SEVENTY-FOUR deployed to Southwest Asia as part of Operations Desert Shield/Storm in support of enforcing the United Nations sanctions against the Iraqi invasion of Kuwait. The Battalion initially deployed on 03 December 1990 to Suman Air Base, Bahrain, redeployed to Ra's Al Mishab in northeastern Saudi Arabia in mid-December 1990, and later retrograded to Camp Rorhbach in Al Jubail in mid-April 1991. Detail sites included ASU, Bahrain; Al Kibrit and Al Khafji, Saudi Arabia; and Suman Air Base, Bahrain. This deployment completion report reflects the actions of NMCB 74 in Operations Desert Shield/Storm from 04 December 1990 to 08 May 1991.

ADMINISTRATION

1. Admin/Personnel Office

The Administrative department provided a full range of services including PAO, ESO, Legal, Medical, Dental, Religious Program, and Special Services. During the deployment the Administrative/Personnel office processed 84 transfers, 89 receipts, 20 reenlistments and 211 advancements.

TRAINING

1. Communications

Covered communications with Navy and Marine Corps units were conducted with the use of CMS material on one HF and four VHF networks. Administrative and tactical wired communication networks were used by the battalion for camp communications.

2. Combat Skills

Defensive operations were conducted and deficiencies identified for future training such as perimeter security, air threat response, and off-camp project security.

3. General Military Training

Training was conducted on a weekly basis covering military subjects as well as personal subjects such as health and welfare, and financial responsibility.

OPERATIONS

1. Special Operations. Temporary details were established in ASU, Bahrain, to expand Fleet Support Facilities; Suman Air Base, Bahrain, in support of a Marine Air Group ELEVEN; Al Jubail, Saudi Arabia, to assist in the construction of a 15,000 man tent camp for Marine Expeditionary Forces; Al Kibrit, Saudi Arabia, to provide airfield maintenance and road maintenance; Al Khafji, Saudi Arabia, to clear roadways to allow resupply of coalition forces; and in support of Joint Task Force Troy involved in deception operations against Iraqi forces.

2. Safety. A strong command safety program with emphasis in worksite supervision provided an astonishing reduction in light duty cases from 61 to 14 and first aid mishaps from 113 to 68 in comparison to our last deployment.

3. Quality. The Battalion's quality control division also served as planning and estimating division supporting $5.5 million worth of construction on over 70 contingency construction projects.

SUPPLY AND LOGISTICS

1. MLO. The office was responsible for ordering, hauling, tracking and delivering materials for the joint USMC/Navy Class IV yard for Northeast Saudi Arabia. Total material issued included 1.8 million board feet of lumber, 37 acres of plywood, 12 tons of nails, 18,000 cubic meters of concrete, and 25,000 cubic meters of fill.

2. Supply Office. The Battalion's supply system operated 120 miles from the nearest supply point and carried on its normal tasking throughout the deployment. The supply office managed three battalion OPTARS and four camp OPTARS with a combined value of 1.3 million dollars, processing over 9,000 requisitions. Automotive Repair Parts carried 8,941 line items supporting all equipment requirements in a rough environment. Food services supported up to 1,400 people at one point with branch galleys located with different details.

EQUIPMENT

1. Equipment Management. A total of 284 pieces of TOA equipment were used during the deployment with 22 additional pieces of non-TOA equipment were leased to maintain the necessary resources to construct, maintain, and repair critical Main Supply Routes 24 hours a day, seven days a week, in addition to supporting other construction projects. An 81.85% availability was maintained while operating equipment around the clock in a harsh and difficult environment.

ADMINISTRATION
SPECIAL STAFF

Enclosure (2)

ADMINISTRATION

1. Lessons Learned:

a. Item. Administrative Support.

Discussion. The requirement for numerous daily reports, messages, and other staff work required the ability to have dependable word processing and document reproduction capabilities. The existing computers and support equipment were constantly down due to the lack of environmentally controlled spaces. The copier in the TOA had never been used and due to it age, parts and supplies were not available. This necessitated purchase of additional copiers.

Recommendation. Incorporate into the TOA computers, copiers and typewriters that are more capable of functioning in harsh field environment.

b. Item. Medical TOA compatability with Marines.

Discussion. The Seabee TOA is not compatible with the Marines AMAL. MEDLOG companies do not fill by line item supply, but replace entire AMAL's. Consequently it is very difficult for MEDLOG companies to resupply Seabee battalions.

Recommendation. The NCF should consider making Seabee Medical TOA'S compatible with Marine AMAL'S.

2. Narrative. The Administrative Office provided the full range of administrative services, including processing of incoming and outgoing correspondence and messages, files and service record maintenance, directives issuance and awards preparation. The Personnel Office performed a full range of personnel related functions including PAO, Education Services and Personnel Accounting. During the deployment the office processed 84 transfers, 89 receipts, 20 reenlistments, no discharges, 211 advancements, and administered 74 enlisted military leadership and 309 advancement exams. The Legal Office processed 4 UCMJ offenses that originated during the deployment and one administrative discharge. The Medical Department conducted an active program in preventive medicine in the area of hygiene and transference diseases. In critical times, the Medical Department closely monitored the consumption of CIPRO (Anti-Biological) and NAPP (Anti-Nerve Agent) tablets. The Dental Department ran into numerous supply problems ranging from the lack of a field sink unit to a lack of dental drills. The Dental Department saw over 425 patients while conducting over 2,888 ADA procedures and maintaining an 84.45% dental readiness. The Chaplain's Office coordinated services with Chaplains from nearby Marine units to satisfy all religious needs. The Chaplain's Office also maintained a field library which contained over 600 paperback books. The Special Services Program inherited a small store with snacks and hygiene items from NMCB-7. Resupply runs were made to Manama, Bahrain, and Al Jubail, Saudi Arabia. The program included athletic gear issue and was responsible for indoor and outdoor movie theaters. At the camp in Al Mishab, there were 2 volleyball courts, 1 basketball court and a softball field for battalion personnel use. The battalion threw an 'Over the Hump' and Seabee Birthday picnic.

TRAINING

Enclosure (3)

TRAINING

1. Lessons Learned.

a. Item. Training in MOPP Gear.

Discussion. The possibility of performing in a CBR environment was very real. Additional training in MOPP Gear to improve the battalion's effectiveness in hostile conditions would be beneficial.

Recommendation. Modify homeport training to include MOPP Gear use on CCCT and FEX exercises.

b. Item. FEX training.

Discussion. The scope of defensive operations practiced in homeport excluded the military evolutions encountered during actual contingency such as: perimeter security, air threat response, and work site security.

Recommendation. Homeport FEX needs to reflect an updated version of our probable mission.

c. Item. Communication Equipment

Discussion. The Battalion maintained two wired communication networks, operated one High Frequency (HF) net, four Very High Frequency (VHF) nets, a mortar net and an administrative net. Battalion details were supported with TOA equipment and supplies which were outdated and incompatible with surrounding Marine units. The comunication maintenance equipment was in very poor condition. Consequently, minimal in-house maintenance was able to be performed on the actual coomunications equipment. The ET's and the RM were not familiar with ground communication equipment which forced us to rely on Marine maintenance units.

Recommendation. Incorporate communication equipment in the battalion which is compatable with that of Marine forces to allow for easy resupply of parts and equipment. Incorporate a containerized communication maintenance shop into the TOA and send the communication personnel to Marine Ground Communications Schools.

d. Item. Ammunition Administration and Weapons Repair.

Discussion. The battalion held over 20,000 items of ammunition but is not required to have an individual trained in ammunition administration. Repairs to weapons were difficult without outside support for parts and equipment from Marine units.

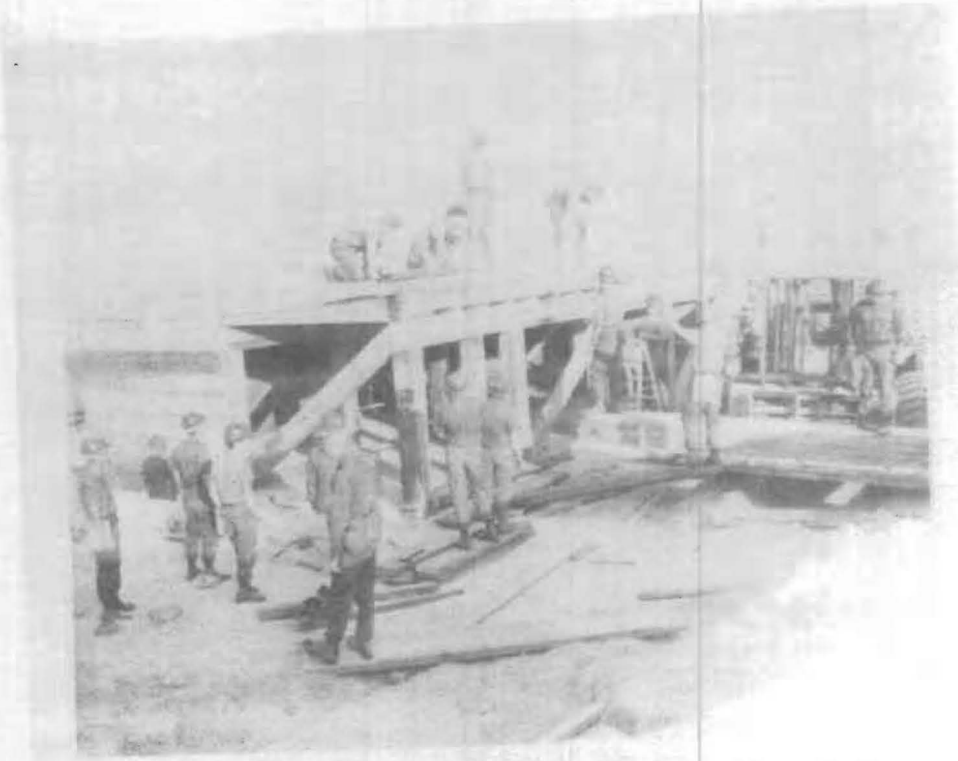
Recommendation. Improve availability of parts in the TOA by making weapons compatible with those held by the Marines. Also carry an individual with an ammunition administration skill.

2. Narrative. Weekly General Military Training was conducted to maintain Battalion readiness. Initially the training focused on military subjects such as weapons safety, reaction to threats, and camouflage. Weapons were sighted using a Marine rifle range. Training by external commands was also coordinated in subjects such as cretemobile operations, blasting, and mine recognition. Significant training and on the job training experience was identified and documented where appropriate as PRCP skills in areas including Embarkation, RRR, CBR Decontamination, ABFC, and Command Post Operations.

THIS PAGE LEFT INTENTIONALLY BLANK

OPERATIONS

Enclosure (4)



OPERATIONS

1. Lessons Learned:

a. Item. Chemical Protective Outergarments (CPO)

Discussion. The CPO suits worn by Seabees are different from those of the Marines. This difference creates several problems:

1. If we had to use Marine decontmination lines, Marines are not normally prepared to cut us out of our suits. At the reissue point, we will draw their type of suit without a hood and our personnel will be unfamilar with these suits.

2. During air and missle alerts the local Marine commanders are likely to don CBR suits as a precaution without regard for the suit's useful life since the Marine suits have a much longer wear period under normal conditions. Our suits however, are affected by exposure and normal use.

3. Limited numbers of CBR suits in theater (the Battalion had roughly 3 suits per man) limits our ability to fulfill our contingency mission in a contaminated environment.

Recommendation. Seabee battalions should be outfitted with CBR suits identical to those of the units that they are supporting in sufficient numbers to allow battalions to operate in a contaminated environment.

b. Item. Decontamination equipment.

Discussion. The minimal amount of area and equipment decontamination gear in the TOA is inadequate for large scale decontamination. The problem is componded by the need to send equipment out on various detachments.

Recommendation. Increase the Battalion CBR TOA to include at a minimum eight M17, and six M13 decontamination units.

c. Item. Camp Setup.

Discussion. Homeport training does not provide sufficient training regarding the setting up of a complete Seabee camp. Homeport FEX and CCCT simulation does not compare to the planning considerations and coordination that goes into the establishment of a fully functional camp.

Recommendation. Incorporate into homeport training a camp development training class using a combination of CCCT exercise, FEX, and staff planning exercise.

d. Item. Communication with project sites, detail sites, and during battalion relocations.

Discussion. Lack of reliable, secure communications made it extremely

difficult to coordinate and pass on critical operational information between remote project sites, details, and departure and destination points during relocations. The battalion's TOA doesnot contain enough portable communication equipment with sufficient power to reach numerous job and detail sites. The battalion had it's 104's set up, but their low power required certain atmospheric conditions to be able to communicate during relocation operations and between the mainbody and details in Bahrain and Kibrit, Saudi Arabia. The Marines required all communication to be encryptic and the lack of KY65 encrypting devices to transmit in secure voice severly limited our communication capability with work sites and details

Recommendation. The NCF must reasses existing communication assets.

e. Item. TOA Adequacy.

Discussion. In theory and in actual practice, battalions are tasked with multiple detachments and details. Peacetime details are often supported through the use of augement equipment. As we split into four groups and had to set up several remote details we expereinced a shortage in tents (at peacetime manning), generators, water heaters and electrical materials. This forced borrowing, leasing, and in some cases, doing without.

Recomendation. The current TOA must be reviewed, sized, and materials provided to meet operations of multiple and remote details.

2. Narrative.

A. General. The Operations Department coordinated project tasking which was received from the THIRD Naval Construction Regiment which supported the FIRST MEF. The projects were then planned, estimated, bill of materials developed, and assigned to a company. Details were established in ASU, Bahrain, December 1990 to January 1991; Suman Air Base, Bahrain, December 1990 to March 1991; Al Jubail, Saudi Arabia, December 1990, and Al Kibrit, Saudi Arabia, February 1991 to April 1991. Two special operations were conducted. A 21 man detail was tasked to fabricate and set up 155 MM Artillery and M1A1 Abram tank decoys along the Saudi Arabia-Kuwait border in support of Joint Task Force Troy. Two days after the liberation of Kuwait City, a 25 man detail was sent to the border outside Al Khafji, Saudi Arabia, to perform road repair and obstacle clearance on the major coast North-South highway. This allowed easier passage of coalition force convoys traveling in and out of Kuwait. The Quality Control Division was a planning and estimating group, responsible for coordinating with the various customers, and the development of plans, specifications, and bill of materials. Once the project was assigned the section oversaw the construction and assisted in the resolution of technical problems. This group planned and estimated over 40 contingency construction projects with a value over $5.5 million dollars in materials. The Engineering Division provided the standard engineering services, surveying, drafting, material and soil testing, technical advice and surveyed over 200 acres of land.

NMCB 74 DEPLOYED TO SAUDI ARABIA

FROM 4 DEC 90 TO 8 MAY 91

LABOR DISTRIBUTION SUMMARY FOR NMCB 74

MANDAYS	DEC	JAN	FEB	MAR	APR	MAY	TOTAL	% TOTAL UNIT LABOR AVAILABLE
DIRECT LABOR	3377	8161	5315	5057	2631	25	24566	26
INDIRECT LABOR	1923	4923	3748	3664	2615	144	17017	18
MIL OPS/READINESS	1160	1518	685	607	3253	522	7745	8
DISASTER RECOVERY OPS	0	0	0	0	0	0	0	0
TRAINING	106	669	239	770	545	0	2329	2
OVERHEAD	5650	7733	9058	9916	9574	1598	43529	46
TOTALS	12216	23004	19045	20014	18618	2472	95186	100
# OF PERSONNEL	588	542	557	576	575	575		
ACTUAL WORKDAYS	22	31	28	27	26	3	137	
%DL	28	35	28	25	14	8	26	
EFFICIENCY	.73	.92	.87	.92	.42	.08	.66	
NUMBER ASSIGNED	N/A	N/A	N/A	N/A	N/A	N/A		
MD'S ASSIGNED	N/A	N/A	N/A	N/A	N/A	N/A		

MAINBODY AVERAGE MANPOWER DISTRIBUTION OF FUNCTION

NMCB 74
SAUDI ARABIA

4 DEC 90 - 8 MAY 1991

Function	OF-13 E1-E3	OF-13 E4-E5	OF-13 E6 & Above	Non-OF-13 E1 & Above	Total
Direct Labor	84	114	22	0	220
Const. Equipment M&R	24	36	12	0	72
OPS/ENG/QC	3	12	9	0	24
Safety	0	0	1	0	1
Project Supervisor	0	0	10	0	10
Project Expedition	2	3	1	0	6
CTR/CRS/MLO	2	4	4	1	11
Repair Parts	2	0	0	2	4
Embarkation	0	0	2	0	2
Ordnance	0	0	0	2	2
COMM/MARS	3	4	1	2	10
Training	0	0	4	0	4
Drug/Alcohol	0	0	1	0	1
Admin/Pers/Legal	0	0	0	13	13
Medical/Dental	0	0	0	9	9
Special Services	0	3	1	0	4
Career Counselor	0	0	0	1	1
Master-at-Arms/Sec	30	24	2	2	58
ESO	0	0	0	1	1
Photo Lab/PAO	0	0	0	2	2
Supply/Disb/Commissary	0	0	0	23	23
Mess Cooks	10	1		21	32
Laundry	0	2	1	0	3
Barber Shop	0	0	0	1	1
Camp Maintenance	8	9	5	0	22
Total	160	212	76	80	536

SAFETY SUMMARY

MONTH	DEC	JAN	FEB	MAR	APR	TOTAL
FATALITIES	0	0	0	0	0	0
* DAYS LT	3	16	10	9	3	41
* CASES LT	2	1	2	6	3	14
* DAYS LD	13	37	29	60	65	204
* CASES LD	3	4	4	6	2	19
* FIRST AID MISHAPS	16	16	12	24	15	83
* GOV VEHICLE MISHAPS	1	1	0	0	4	6
GOV VEHICLE REPAIR COST	#950	#50	0	0	#1375	#2375
GOV VEHICLE MILES DRIVEN	27,940	59,250	59,802	103,535	94,940	345,467

SAUDI ARABIA

Enclosure (4)

NO PHOTO AVAILABLE

JB1-900 MEF BEDDOWN AREA

1. General: Assisted NMCB-5 in the construction of a 15,000 man beddown camp for SECOND Marine Expeditionary Force. Work consisted of the forming, placing and stripping of 17' x 33' x 6' concrete berthing pads and providing heavy equipment support.

2. Direct Labor Expended: NMCB-74 - 916 MD

3. Composition of Work Force:

BU	CE	SW	EO
33	1	9	6

4. Status of Project:

Start Date: 05 Dec 90
WIP percent at turnover: N/A
WIP percent at takeover: N/A
Completed: Detasked on 14 Dec 90

5. Materials: No problems encountered (NPE)

6. Engineering: NPE

7. Problems areas: None

NO PHOTO AVAILABLE

MB1-900 CAMP MAINTENANCE

1. General: Provided periodic maintenace and repair to camp electrical generation and distribution system, 4-holers, water storage, tent heaters, MD-80 boilers, shower facilities, galley equipment, waste disposal, potable water transportation and laundry service for the battalion.

2. Direct Labor Expended: NMCB-74 - 3040 MD

3. Composition of Work Force:

BU	CE	UT
5	6	5

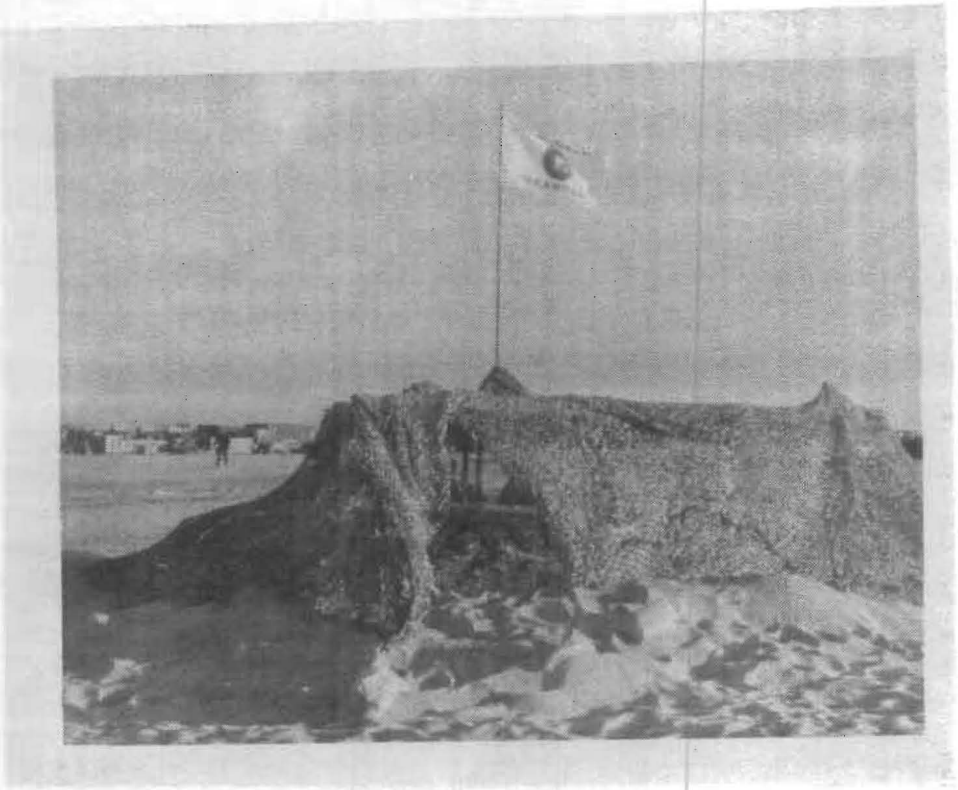
4. Status of Project:

Start Date: 18 Dec 90
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 21 Apr 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None



MB1-901 CB Camp Defense
MB1-902 NMCB Camp Construction

1. General: Construct a 650 man camp and provide fortification for the Battalion Main Body at Ras Al Mishab, Saudi Arabia. The work consisted of the construction of command center bunker, 5 company command post bunkers, 40' X 114' galley and storage areas, 13 Administrative strongback tents, 85 concrete berthing pads (17' x 33'), 15 slot trenches (reinforced with heavy timbers and sand bags), 4 mortar pits, 9 concrete pads of various sizes, installation of the electrical generation and distribution system, 40' x 100' Bravo Company tent maintenance spaces, 4-hole latrine units, shower facilities, maintenance pads, operation of laundry skids and other support functions. This included the camp breakdown and retrograde of the camp.

2. Direct Labor Expended: NMCB-74 - 2278 MD

3. Composition of Work Force:

Average Crew	BU	SW	EO	UT	CE	EA
	20	8	4	6	6	2

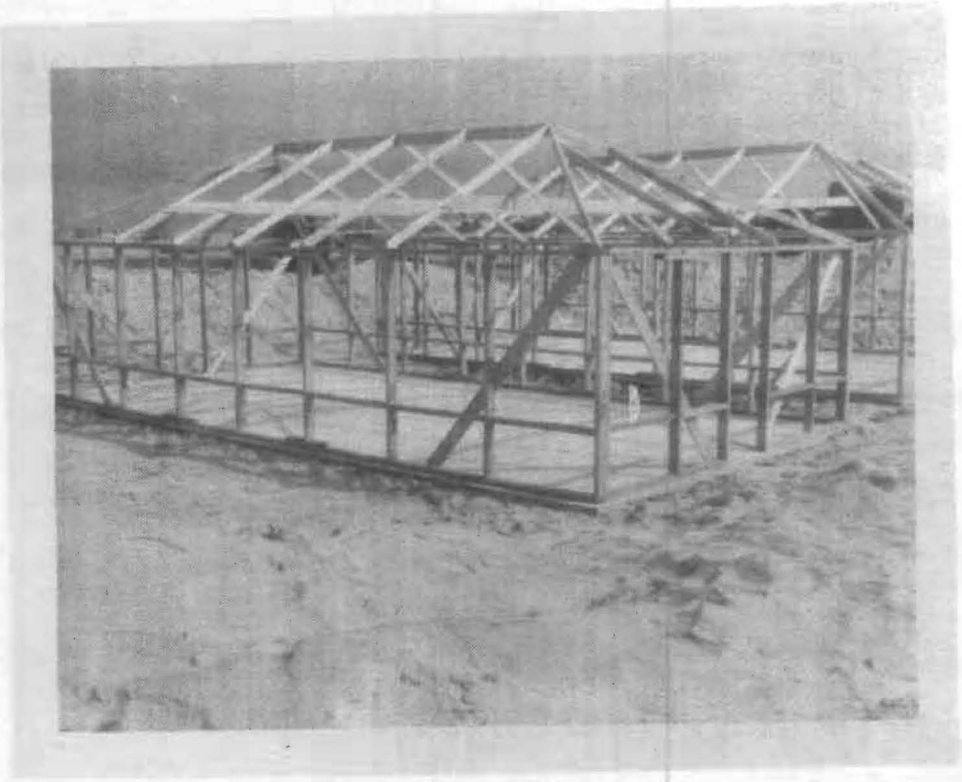
4. Status of Project:

Start date: 18 Dec 90
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 21 Apr 91

5. Material. NPE.

6. Engineering. NPE.

7. Problem Areas. None



MB1-904 MAG 26 Tent Camp

1. General. Construction of a 5000 man tent camp for Marine Air Wing TWENTY-SIX (MAG 26). The work consisted of the construction of berthing, galley and operational spaces to include internal roads, the placing of 341 concrete slabs, the construction of 129 strongback tents, 5 wooden SWA Huts and the installation of utilities in support of MAG 26. Teardown and clean up of the camp at the end of hostilities was included as part of the tasking.

2. Direct Labor Expended: NMCB-74 - 2500 MD

3. Composition of Work Force.:

BU	SW	CE	UT	EO	MARINES
59	15	5	3	8	3

4. Status of Project:

Start date: 18 Dec 90
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 25 Mar 91

5. Materials. All electrical and plumbing materials were delivered late, and some were hard to fill in theater, thus delaying construction. Materials were transported from Al Jubail by Battalion personnel with organic assests.

6. Engineering. The erection of protective berms around berthing tents was a time consuming process.

7. Problems areas. The presence of a high water table obstructed the camp layout and the grey water distribution system.

MB1-905 Airfield Road

1. General: Construct a 1 mile road from the aviation ASP to the Air Field. The work consisted of the grading, hauling, filling, and compacting a 1 mile section in preparation for an asphalt overlay to be accomplished by contract.

2. Direct Labor Expended: NMCB-74 - 8 MD

3. Workforce Composition:

EO	EA
2	2

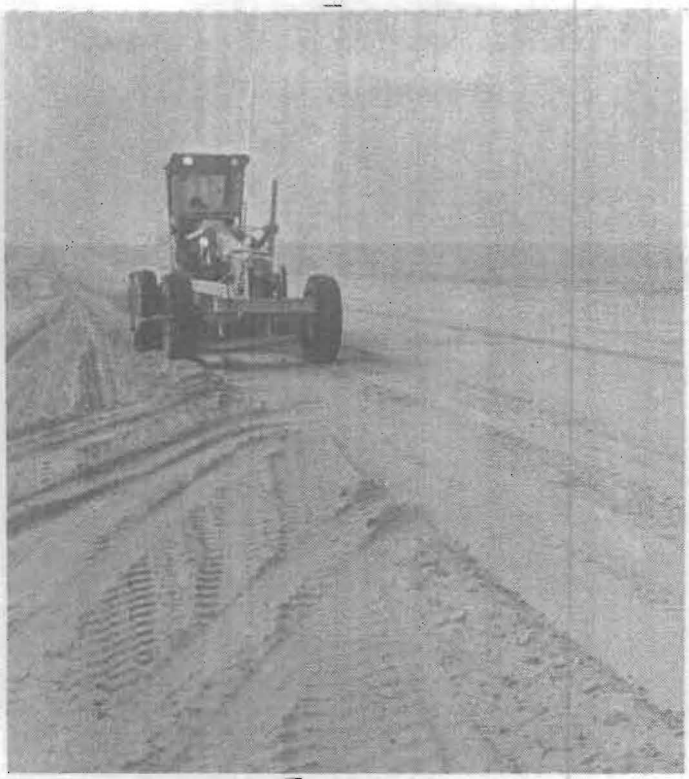
4. Status of Project:

Start Date: 27 Dec 90
WIP at takeover: 0
WIP at turnover: 100
Completed: 31 Dec 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: Due to the hostilities, the asphalt contractor would not mobilize and complete its portion of the project. The requirement for asphalt was overtaken by events and was never accomplished. Counting on contract support during hostilities is tenuous and should not be counted on for critical work.



MB1-907 Main Supply Route (MSR) Construction and Maintenance

1. General: Construct and maintain over 107 KM of dirt roadway. The work constisted of the construction of a 50 KM, six lane road and the maintenance of 107 KM of both 6 and 4 lane sand roadway. It involved dust control, surveying, grading and compacting over 3 million square meters of sand based road and the quarring, hauling, placing, and compacting over 280,000 cubic yards of fill. Maintenance was performed until detasked 3 April 1991.

2. Direct Labor Expended: NMCB-74 - 2,051 MD

3. Composition of Workforce:

EO	CM
23	4

4. Status of Project:

Start Date: 10 Jan 91
W/P Percent at takeover: 0
W/P Percent at turnvover: 100
Completed: 03 Apr 1991

5. Materials: NPE

6. Engineering: NPE.

7. Problem Areas:

(a) Heavy rainfall, clay soil in roadway bed, and heavy traffic caused the roadway to become very slick, muddy, rutted and difficult to work.
(b) Dust from heavy traffic created a significant visibility problems.

(c) Insufficient equipment was available due to 24 hour operations and breakdowns.

(d) During the period of hostilities security crews of 8 to 12 personnel were required taking personnel away from direct labor.

NO PHOTO AVAILABLE

MB1-908 Hospital LZ

1. General: Construct one concrete helicopter landing pad and access road. The work consisted of leveling, compacting, forming, and placing concrete for one 100' X 100' X 6" concrete helo pad, and a 100' X 20' road.

2. Direct Labor Expended: NMCB-74 - 20 MD
Marine Corps - 16 MD
Cumulative - 36 MD

3. Composition of Work Force:

EO	EA	BU	SW	USMC
1	2	12	2	4

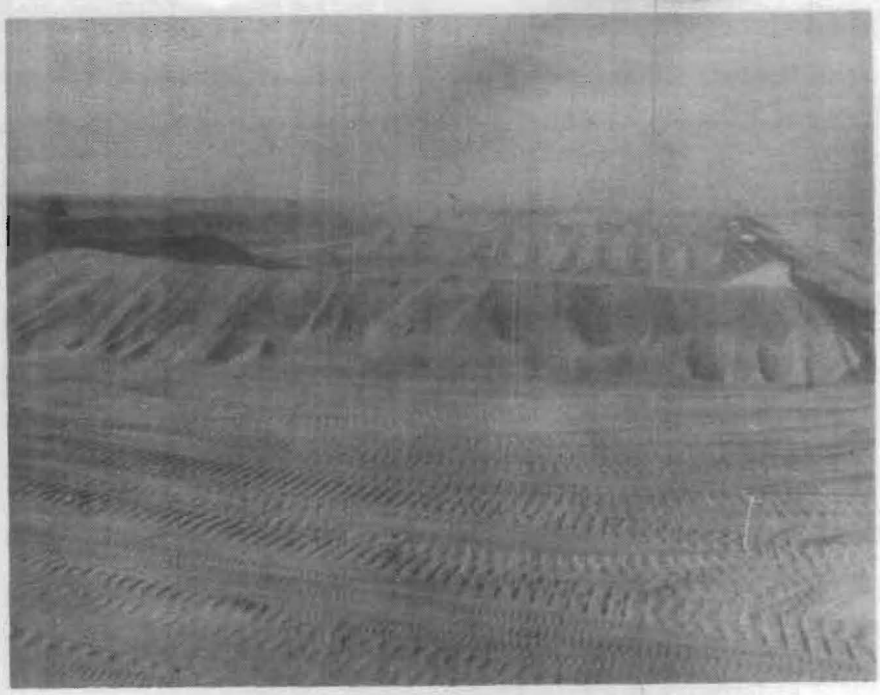
4. Status of Project:

Start Date: 15 Jan 91
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 06 Feb 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None



MB1-909 Construct Ammunition Supply Point (ASP) No. 3

1. General: Construct a 1,400 feet by 1,900 feet tactical Ammunition Supply Point containing fifty-six 150' X 200' storage cells. The work included of the stabilization of 2.5 miles of 40' wide access road and 4.3 miles of interior roads, the compaction of over 65,000 cubic yards of fill, the erection of over 30,000 liner feet of 11' high berms containing over 162,000 cubic yards of material.

2. Direct Labor Expended: NMCB-74 - 460 MD

3. Composition of Work Force:

EO	CM
9	2

4. Status of Project:

Start Date: 27 Dec 90
WIP percent of takeover: 0
WIP percnet of turnover: 100
Completed: 19 Jan 91

5. Materials: NPE.

6. Engineering: Specifications, layout, and customer desires were frequently changed.

7. Problem Areas: Limited number of bulldozers due to the harsh environment and frequent breakdowns and other horizontal tasking extended the project's timely completion.

NO PHOTO AVAILABLE

MB1-910 Construction of Strongbacks and Wood Decks for Medical detachment.

1. General: Construct 11 wood decks and strongbacks for a medical detachment Ra's Al Mishab Military Base. The work consisted of the construction of 11 plywood and 4" X 4" wooden decks, 8 standard strongbacks, and the modification of three strongbacks to form an operating room.

2. Direct Labor Expended: NMCB-74 - 87 MD

3. Composition of Work Force:

BU	SW
12	2

4. Status of Project:

Start date: 05 Jan 91
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 12 Jan 91

5. Material: NPE

6. Engineering: NPE

7. Problem Areas: None

NO PHOTO AVAILABLE

MB1-912 Miscellaneous Base Support

1. General: Provide support to the local Saudi Military Base and to various Marine Corps, Army, Air Force, Navy, and Coalition Forces in the area. Major work included the grading of a 500' X 400' area for a Saudi Fuel Farm, the excavation of 18 - 30' X 15' cells for missile launchers for the Marines, repair of damaged guard houses, repair of damage light poles on the Saudi Base, the construction of defensive berms and positions for a Moroccan Army unit.

2. Direct Labor Expended: NMCB-74 - 302 MD

3. Composition of Work Force: Multiple size crews ranging from 2 to 12 personnel.

4. Status of Project:

Start Date: 8 Feb 91
WIP at takeover: 0
WIP at turnover: 100
Completion: 21 Apr 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None

MB1-913 Air Force Evacution Site

1. General: Provide the excavation for a bunker, two personnel trenches and site preparation for two 16' X 32' general purpose concrete pads. The work consisted of excavation of an 82 CY bunker and two 76 CY trenches, and the leveling and compacting of an area for two 16' x 32' general purpose concrete pads.

2. Direct Labor Expended: NMCB-74 - 7 MD
Marine - 2 MD
Cumulative - 9 MD

3. Composition of Work Force:

EO	USMC
2	1

4. Status of Project:

Start Date: 16 Jan 91
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 27 Jan 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None.

MB1-915 Airfield Apron

1. General: Construct a contingency aircraft parking apron using soil-cement stabilization techniques. The work consisted of the grubbing, leveling, and soil-cement stabilization of a 1,000' X 900' area, a 700' X 800' area, and 4 - 80' X 100' taxiways. Over 900 tons of cement were used in the completion of this project. This project was accomplished in conjuction with NMCB 24 personnel and leased equipment.

2. Direct Labor Expended: NMCB-74 - 544 MD

3. Composition of Work Force:

EO	EA
22	3

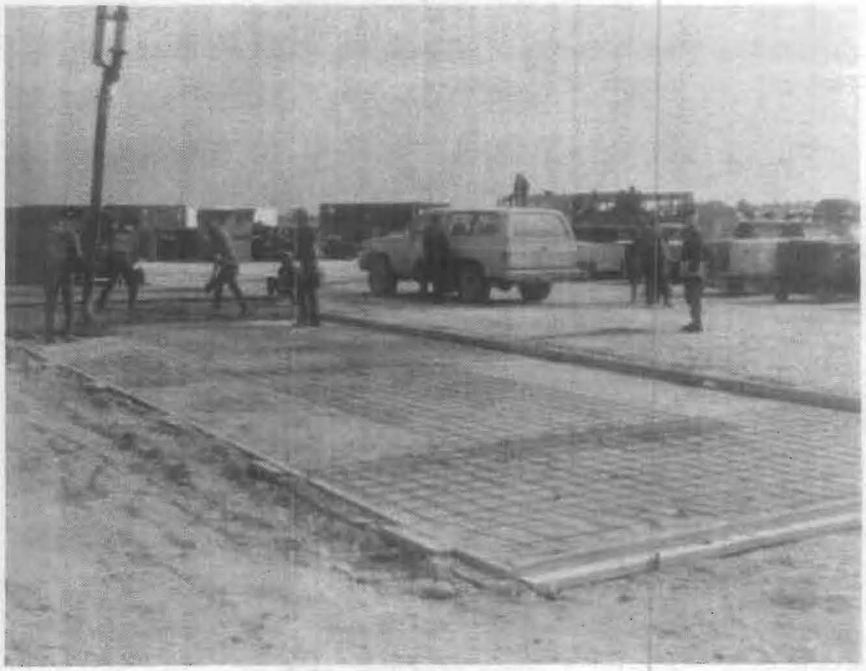
4. Status of Project:

Start Date: 7 Jan 91
WIP Percent at takeover: 0
WIP Percent at turnover: 100
Completed: 10 Feb 91

5. Materials: NPE.

6. Engineering: NPE

7. Problem Areas: Language barrier was a major obstacle between host nation contractors and U.S. personnel. Maintaining proper water, soil, and cement mix ratios was hampered due to water truck availability and an inadequate source of water. The lack of adequate amounts of fresh water required the use of saltwater.



MB1-916	Strongback Tents for 1st Radio Battalion
MB1-917	Various Concrete Pads
MB1-920	USAF/LAAM Concrete Pads
MB1-925	Sixty-Six Concrete Pads
MB1-929	GSG Bakery Concrete Pad
MB1-931	Concrete Pads for MACS-2
MB1-932	Concrete Pads for U.S. Army
MB1-933	GSG-2 HQ Concrete Pads
MB1-936	GSG-2 Concrete Maintenance Pads

1. General: These projects consisted of the placing of numerous 17' X 33' general purpose, 20' X 40', and other size concrete pads, and the construction of 16' x 32' strongback tents for the First Marine Expeditionary Force and supporting units. A total of 2,355 cubic yards of concrete and 70 strongback tent frames were constructed in the combined projects.

2. Direct Labor Expended: NMCB-74 - 848 MD
USMC - 27 MD
Cumulative - 875 MD

3. Composition of Work Force: A typical crew:

BU	SW
12	2

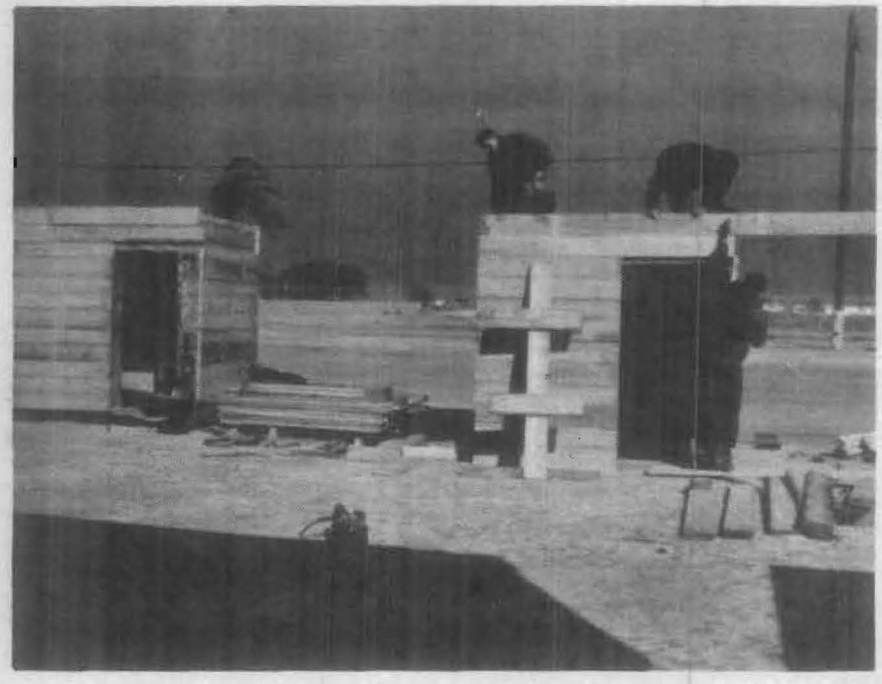
4. Status of Project:

Start date: 25 Dec 90
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 28 Feb 91

5. Material: NPE.

6. Engineering: NPE

7. Problem Areas: None



MB1 - 922 Construct Personal Bunkers
MB1 - 934 Construct Bunkers for SEALS

1. General: The work consisted of the construction of three 40' X 40' 'L' type slot trenches for local Marine support units, and the fabrication of two 8' X 8' X 8' heavy timber bunkers for the SEAL teams.

2. Direct Labor Expended: NMCB 74 - 100 MD
USMC - 164 MD
Cumulative - 264 MD

3. Composition of Work Force:

BU	SW	EO
12	2	1

4. Status of Project:

Start Date: 26 Jan 91
WIP Percent at takeover 0
WIP Percent at turnover 100
Completed: 16 Feb 91

5. Material: NPE

6. Engineering: NPE

7. Problem Areas: None

MB1-923 Helo Pads for Ammunition Supply Point 3
MB1-926 Helo Pads for Aviation Ammunition Supply Point

1. General: Construct six 100' X 100' X 8" helicopter landing pads to support the movement of ammunition. The work consisted of forming and placing of approximately 1,350 cubic yards of concrete. The largest placement for one day was 675 meters.

2. Direct Labor Expended: NMCB-74 - 244 MD

3. Composition of Work Force:

	ASP 3:		Aviation ASP:	
	BU	SW	BU	SW
	10	4	42	8

4. Status of Project:

Start date: 26 Jan 91
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 05 Feb 91

5. Materials: NPE.

6. Engineering: NPE

7. Problem Areas: None

NO PHOTO AVAILABLE

MB1-924 Road Cuts

1. General: Provide five road cuts at various location on Ra's Al Mishab military base to support the installation of a fuel line. The work consisted of the cutting of various roads in five location and then filling in the cuts with concrete to make level with the existing road.

2. Direct Labor Expended: NMCB-74 - 23 MD

3. Composition of Work Force:

BU
5

4. Status of Project:

Start Date: 3 Feb 91
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 26 Mar 91

5. Materials: Concrete for road cuts was delayed by the start of the war.

6. Engineering: NPE

7. Problem Areas: None

NO PHOTO AVAILABLE

MB1-937 Various Concrete Pads in Al Kibrit

1. General: Provide 18 various sized concrete pads to support local Marine units. The work consisted of the site preparation, forming, placing and stripping of 18 various sized concrete pads.

2. Direct Labor Expended: NMCB-74 - 15 MD

3. Composition of Work Force:

BU	SW
10	2

4. Status of Project:

Start Date: 26 Feb 91
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 27 Feb 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None.

NO PHOTO AVAILABLE

MB1-938 Maintenance on Kibrit C-130 Air Field

1. General: Maintain a 1,500 ft expeditionary runway for C-130 aircraft. Runway was required to be graded, compacted, and rolled after every 4 to 6 landings.

2. Direct Labor Expended: NMCB-74 - 218 MD

3. Composition of Work Force:

EO	CM
7	1

4. Status of Project:

Start Date: 13 Feb 91
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 25 Mar 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None

NO PHOTO AVAILABLE

MB1-939 EPW Camp Galley

1. General: The work consisted of the reconstruction of a 40' X 100' SWA Hut galley which had been damaged by a wind storm at an occupied Enemy Prisoner of War (EPW) camp. The project was accomplished in 70 hours.

2. Direct Labor Expended: NMCB-74 - 130 MD

3. Composition of Work Force: Two shifts of:

BU	SW
22	6

4. Status of Project:

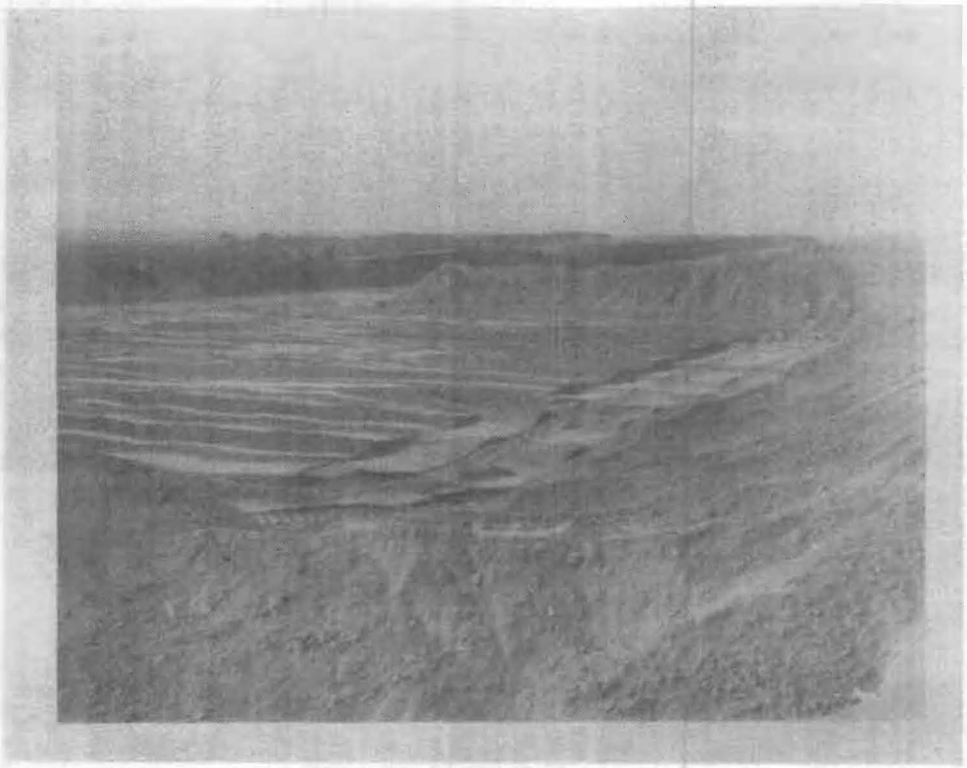
Start Date: 20 Feb 91
WIP Percent at takeover: 0
WIP Percent at turnover: 100
Completed: 23 Feb 91

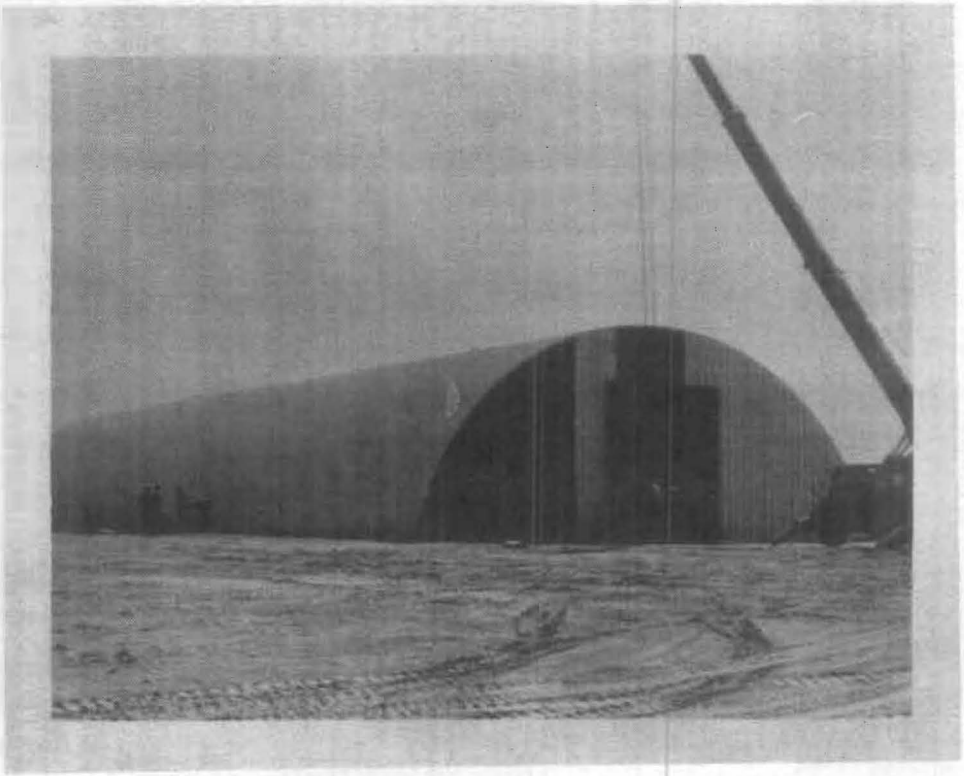
5. Material: NPE

6. Engineering: NPE

7. Problem Areas: None

THIS PAGE LEFT INTENTIONALLY BLANK





MB1-940 Ammunition Supply Point No 3 Retrograde

1. General: Construct 500' X 1000' segregation area; expand the existing ASP by constructing 120 - 100' X 150' ammunition storage cells; construct two 60' X 160' K-span cleaning/packing building with explosion proof electrical lighting and outlets; install wash down pad and drainage system; erect four 30' guard towers; erect 4 - 32' X 70' shed facilities; place 20 - 32' X 70' concrete pads; place 23 - 16' x 32' concrete pads with strongback tents, and apply MC-250 on 25,000 LF of road for dust control.

2. Direct Labor Expanded: NMCB-74 - 3,160 MD

3. Composition of Work Force:

BU	SW	EO	CE	UT	EA
60	15	23	8	4	4

4. Status of Project:

Start Date: 8 March 91
WIP Percent at takeover: 0
WIP Percent at turonver: 100
Completed: 12 April 91

5. Material: NPE

6. Engineering: NPE

7. Problem Areas: Delayed arrival of electrical materials delayed the completion of the K-span metal building.

THIS PAGE LEFT INTENTIONALLY BLANK

DETAIL ONE

Enclosure (4)

DETAIL ONE, SUNAN AIR BASE, BAHRAIN

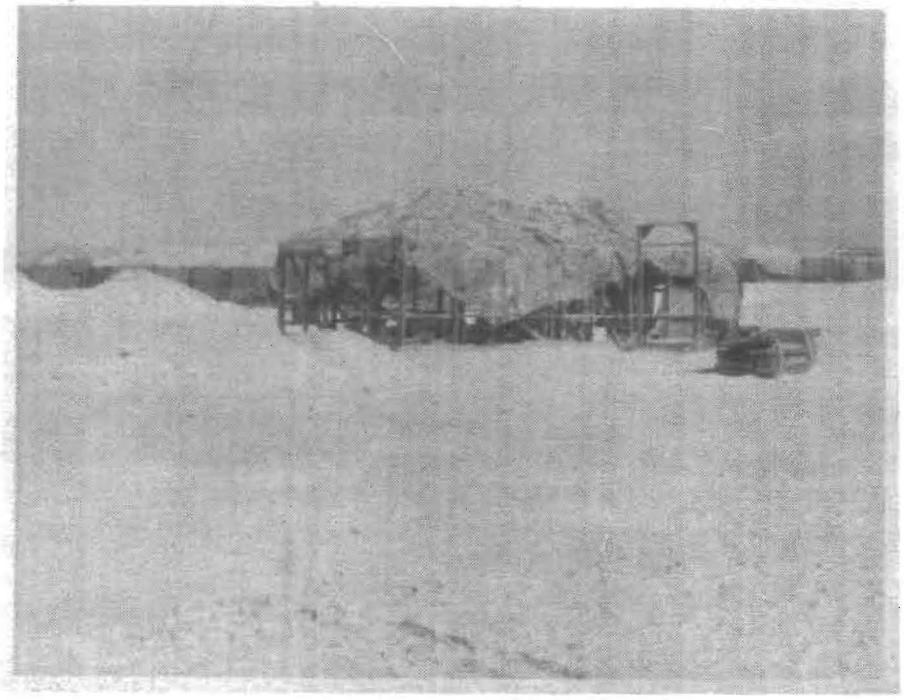
1. Lessons Learned. None

2. General. NMCB-74 maintained a sixty-four man detail at Suman Air Base, Bahrain, after relocating to Northeast Saudi Arabia. The detail was tasked with providing construction support for Marine Aircraft Group ELEVEN and the Bahrain Defense Force during Operations Desert Shield and Desert Storm. In addition, the detail maintained the capability to perform Rapid Runway Repair and war damage repair. The detail maintained 56 pieces of CESE for the majority of their tasking. The Detail's projects included completing a 400,000 SF AM-2 Matting parking apron for tactical aircraft, office spaces for a number of USMC Tactical Aircraft Squadrons, berthing spaces for various Marine Corps units, a 800' fire station access road, and a 60' X 250' galley.

Detail One's main threats were air attacks and terrorism for which they constructed four concrete bunkers around the camp, developed entrenched fighting positions and maintained security watches around the clock to protect the detail.

As the threat of an air strike decreased and tasking ran short as Operation Desert Storm progressed, the detail was redeployed to the mainbody location in Saudi Arabia in late February. Less than half of the detail remained behind through early March to complete the 60' x 250' Marine galley.

3. Project Summary. See following pages.



BIO-907 Construction/Maintenance NMCB Camp

1. General: Construction and maintenance of Seabee camp. Work included construction of four - 12' x 16' x 6' concrete bunkers, construction of surrounding earth berms, establishing fighting positions and upgrade of strongback tents to SWA Huts.

2. Direct Labor Expended: NMCB-74 - 994 MD

3. Composition of Work Force:

BU	EO	EA	SW
10	4	2	4

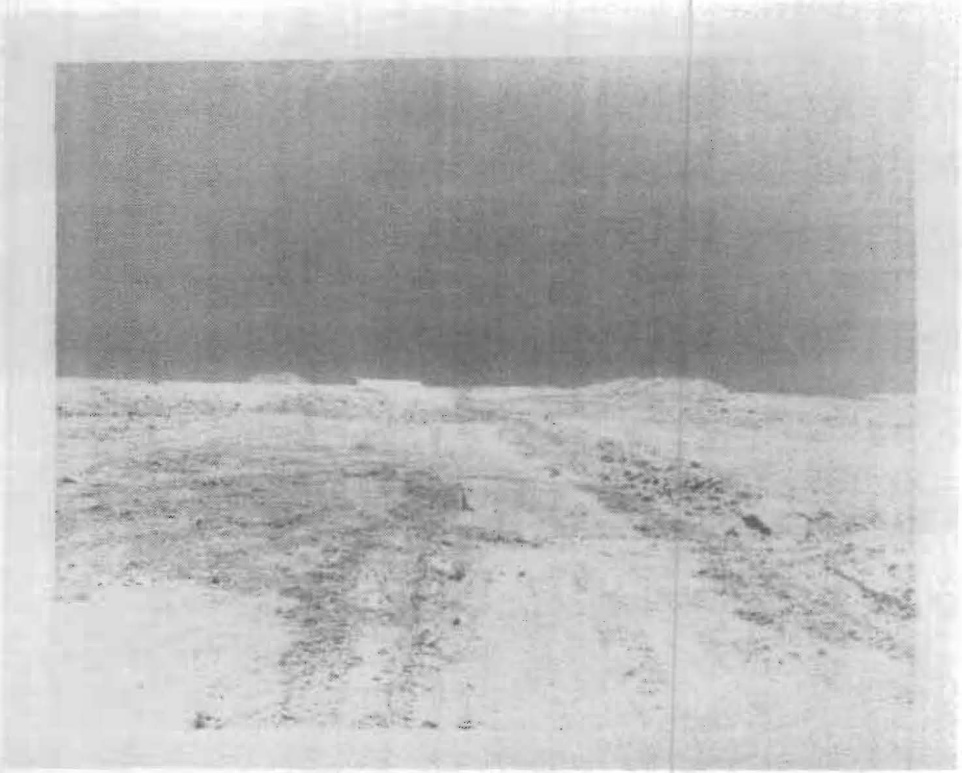
4. Status of Project:

Start Date: 8 Dec 90
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 14 Mar 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None



B10-924 Construct Maintenance Transfer Road

1. General: Construct an asphalt road 7,164 feet in length, 26 feet in width, with a 3 inch thick overlay, and with 5 foot shoulders. Work included the removal of a 700 feet limestone shelf, leveling, compacting, and preparing the area for a contractor to lay the asphalt.

2. Direct Labor Expended: NMCB-7 - 24 MD
NMCB-74 - 399 MD
Cumulative - 423 MD

3. Composition of Work Force:

EA	EO
2	9

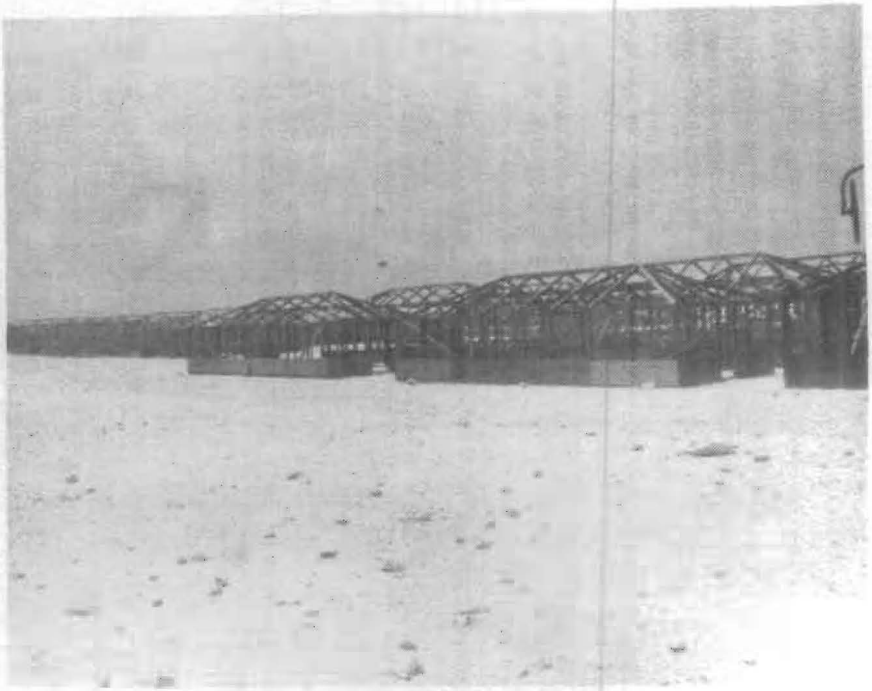
4. Status of Project:

Start Date: 6 Oct 90
WIP percent at takeover: 2
WIP percent at turnover: 36
Completed: 18 Feb 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: The removal of the limestone shelf proved to be a major problem along with the large fill requirement. This required a revision to the scope of work and the subcontracting of the asphalt work.



BI1-914 Improve Tent Camp Berthing

1. General: Upgrade 3,500 man tent berthing to strong back berthing tents. The work consisted of the replacement of doors, screening in strongbacks and other improvements to the camp.

2. Direct Labor Expended: NMCB-7 - 2,922 MD
NMCB-74 - 44 MD
Cumulative - 2966 MD

3. Composition of Work Force:

BU	SW
4	1

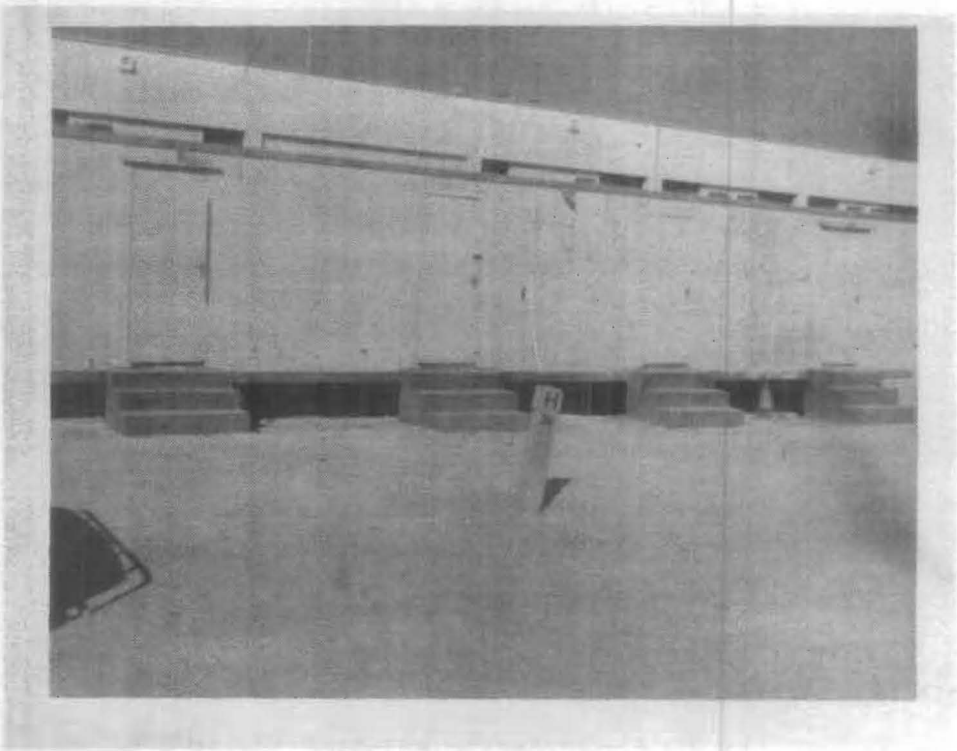
4. Status of Project:

Start Date: 8 Dec 90
WIP percent at takeover: 97
WIP percent at turnover: 100
Completed: 14 Mar 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None



BI1-926 Dental Trailer Rehab

1. General: Provide interior upgrades to existing trailers to support the relocation of the Marine Air Wings dental personnel. The work consisted of the upgrading of electrical and plumbing, and the installation of shelves and vanities to support relocation of the dental personnel.

2. Direct Labor Expended: NMCB-74 - 50 MD

3. Composition of Work Force:

BU	CE	UT
2	2	2

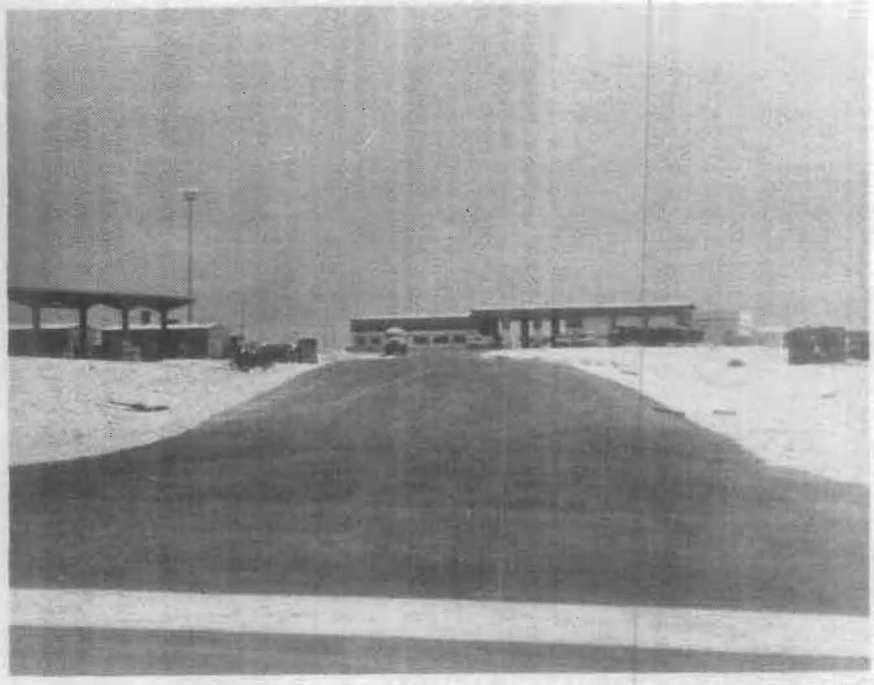
4. Status of Project:

Start Date: 10 Dec 90
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 16 Dec 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None



BI1-937 Construct Fire Station Access Road

1. General: Provide an additional access for the Crash, Fire, and Rescue personnel from the existing station to the aircraft apron. The work consisted of excavating, filling, and compacting to prepare the road for a 2 1/2" asphalt overlay to be accomplished by a contractor. Road was 250 meters long and 10 meters wide with 1 1/2 meter shoulders on each side.

2. Direct Labor Expended. NMCB-7 - 405 MD
NMCB-74 - 130 MD
Cumulative - 435 MD

3. Composition of Work Force:

EO	EA
12	3

4. Status of Project:

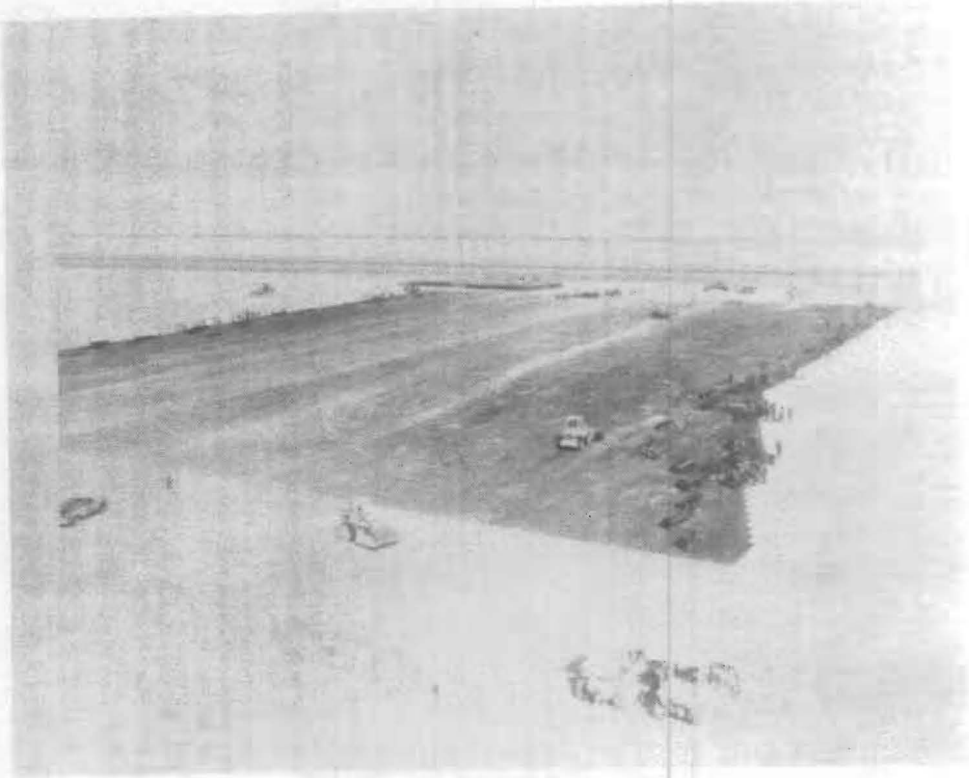
Start Date: 16 Oct 90
WIP percent at takeover: 60
WIP percent at turnover: 100
Completed: 1 Jan 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None

THIS PAGE LEFT INTENTIONALLY BLANK



BI1-939 Install AM-2 Matting Aircraft Parking Apron

1. General: Install 396,000 square feet of AM-2 Matting to augment existing aircraft parking space. The work included site preparation, grading, filling/cutting, leveling, and compaction for sub-base/base course in preparation for AM-2 matting, and the laying of the matting. To assist in getting the apron operational the Marine Service Support Unit and members of the Marine Air Wing maintenance unit worked with the Seabees to lay the matting.

2. Direct Labor Expended: NMCB-7 - 768 MD
NMCB-74 - 970 MD
USMC - 420 MD
Cumulative - 2,158 MD

3. Composition of Work Force:

EO	EA	BU/SW	MARINES	OTHER
25	4	59	52	20

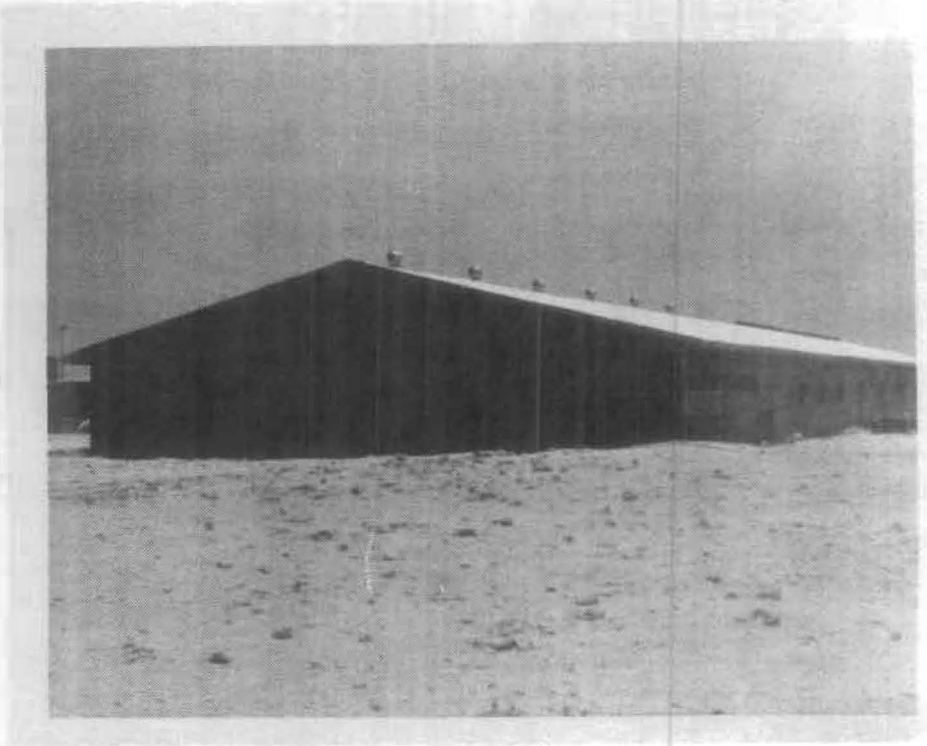
4. Status of Project:

Start Date: 18 Oct 90
WIP percent at takeover: 85 (Earthwork/siteprep)
WIP percent at turnover: 100
Completed: 19 Dec 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None



BI1-941 Upgrade Mess Facility

1. General: Construct 60' X 250' galley on concrete pad. The work consisted of the fabrication and installation of 60' wooden trusses, construction of exterior and interior walls, installation of doors, windows, lighting, electrical receptacles, faucets, serving counters, and other interior items, plus installation of plywood walls and a sheet metal roof. Site prep included 750 cubic meters of fill.

2. Direct Labor Expended: NMCB-74 - 657 MD

3. Composition of Work Force:

EO	EA	BU	SW
4	2	9	5

4. Status of Project:

Start Date: 27 Dec 90
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 12 Mar 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None

BI1-967 Construct Flight Equipment Spaces

1. General: Construct four SWA Huts on plywood decks. The work consisted of the installation of lighting, air conditioners, and electrical receptacles in each SWA Hut.

2. Direct Labor Expended: NMCB-74 - 320 MD

3. Composition of Work Force:

BU	SW	CE
12	2	3

4. Status of Project:

Start Date: 16 Jan 91
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 23 Feb 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None

BI1-962 Construct Squadron Space VMAQ-2
BI1-971 Construct Strongbacks for CFR
BI1-972 Construct Pads for Mals-11 Pol
BI1-976 Construct Additional Strongbacks
BI1-978 Construct Squadron Spaces for VMFA-X
BI1-979 Construct Squadron Spaces VMFA-314
BI1-980 Construct Squadron Spaces VMFA-451
BI1-981 Construct Squadron Spaces VMFA-235
BI1-982 Construct Squadron Spaces VMFA-333
BI1-983 Construct Squadron Spaces VMA (ALO) - 224
BI1-988 Construct Squadron Maintenance Spaces
BI1-991 Construct Strongback Maintenance Facility
BI1-992 Construct Concrete Pads for Admin Spaces
BI1-995 Construct Additional berthing pads for MWSS
BI1-997 Construct Command Post Strongbacks
BI1-998 Construct Additional Billeting
BI1-999 Construct Squadron Spaces VMFA

1. General: In support of various Marine Air Squadrons, a total of 37 strongback tent frames and 8 command post tent frames with electrical fixtures; 70 - 16' X 38' concrete pads; and 3 - 10' X 26' concrete pads were constructed.

2. Direct Labor Expended: NMCB-74 - 612 MD

3. Composition of Work Force:

Average Crew	BU	CE	SW
	6	3	2

4. Status of Project:

Start Date: 8 Dec 91
WIP Percent at Takeover: 0
WIP Percent at Turnover: 100
Completed: 7 March 1991

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None

NO PHOTO AVAILABLE

BI1-968 Construct Pad for MALS-11

1. General: Construct one 20' X 20' concrete pad. The work consisted of the site preparation, forming, and placing of concrete for one 20' X 20' concrete pad.

2. Direct Labor Expended: NMCB-74 - 10 MD

3. Composition of Work Force:

BU	SW
1	1

4. Status of Project:

   Start Date: 27 Dec 90
   WIP percent at takeover: 0
   WIP percent at turnover: 100
   Completed: 29 Dec 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None

NO PHOTO AVAILABLE

BI1-975 CO's Discretionary

1. General: Provide support for various units on the base. The work included; hauling fill for various units for construction of bunkers, employing rock drill to anchor helo pads, erecting berms, and upgrading a rifle range area.

2. Direct Labor Expended: NMCB-74 - 48 MD

3. Composition of Work Force:

EA	BU	EO
2	2	4

4. Status of Project:

Start Date: 8 Dec 90
WIP percent at takeover: 0
WIP percent at turnover: 100
Completed: 7 Mar 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: None

THIS PAGE LEFT INTENTIONALLY BLANK

ASU DETAIL

Enclosure (4)

NO PHOTO AVAILABLE

BHO-901 PORTA-Magazine

1. General: Completing the construction of an ammunition magazine. The work consisted of the application of a texcoat finish to a 13' x 16' ammunitions magazine.

2. Direct Labor Expended: NMCB-7 - 158 MD
NMCB-74 - 15 MD
Cumulative - 173 MD

3. Composition of Work Force: BU
3

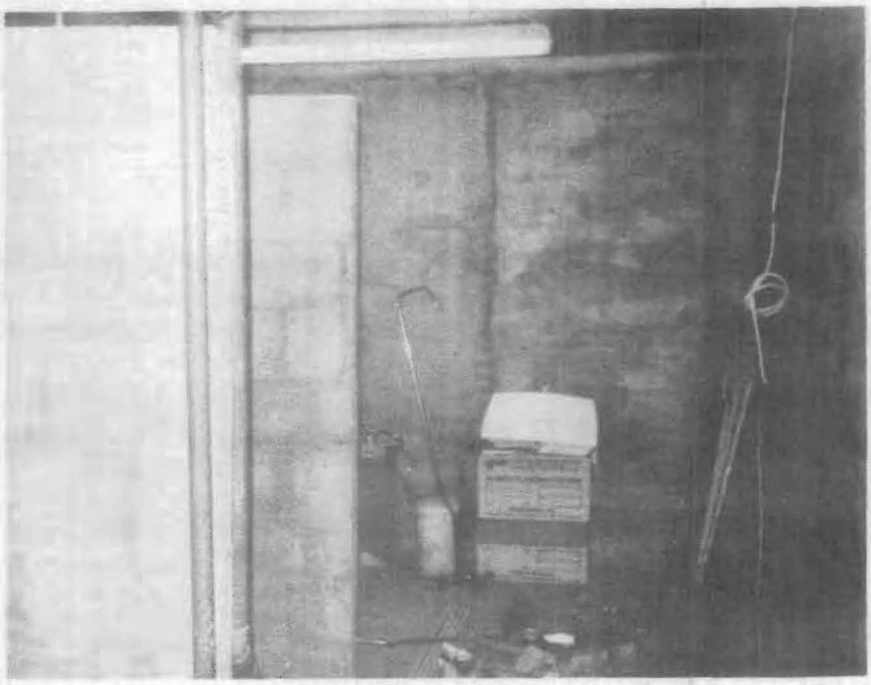
4. Status of Project:

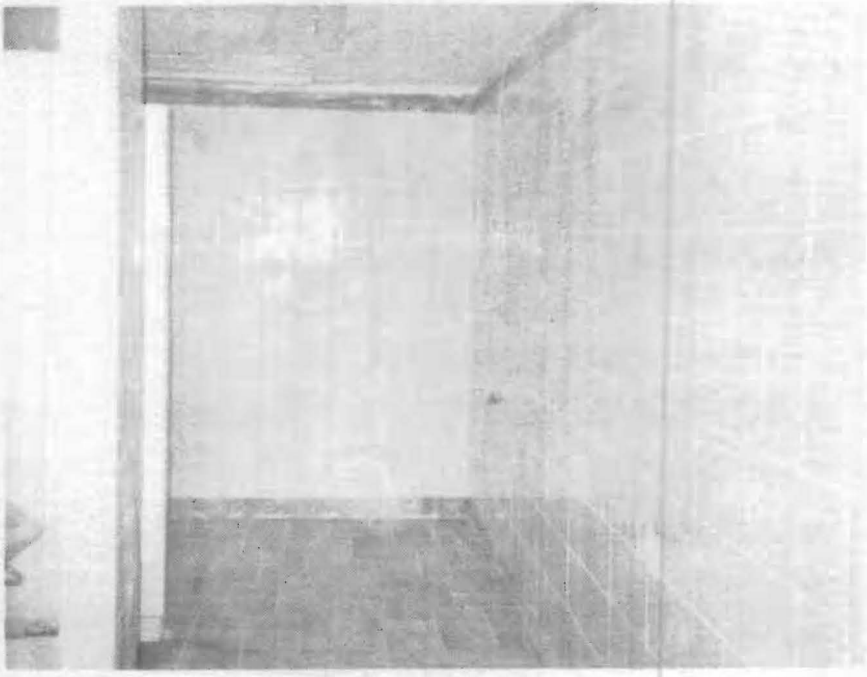
Start Date: 18 Nov 90
WIP percent at takeover: 98
WIP percent at turn over: 100
Completed: 15 Dec 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: The scratch coat of plaster was applied too rough for the texcoat to adhere. The plaster scratch coat had to be removed and refinished.





BHO-902 Expand Public Works Shop

1. General: Provide and upgrade the existing Public Works Shop area. The work consisted of the installation of ceramic wall and floor tile and the finish plumbing in two head facilities.

2. Direct Labor Expended: NMCB-7 - 785 MD
NMCB-74 - 115 MD
Cumulative - 900 MD

3. Composition of Work Force:

BU	SW	UT
1	2	2

4. Status of Project:

Start Date: 12 Nov 90
WIP percent at takeover: 75
WIP percent at turnover: 100
Completed: 26 Jan 91

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: Lack of experience in ceramic tile installation.

NO PHOTO AVAILABLE

BHO-905 ASU Sea Club Head

1. General: Installed ceramic wall and floor tile head areas.

2. Direct Labor Expended: NMCB-7 - 191 MD
NMCB-74 - 24 MD
Cumulative - 215 MD

3. Composition of Work Force: BU
3

4. Status of Project:

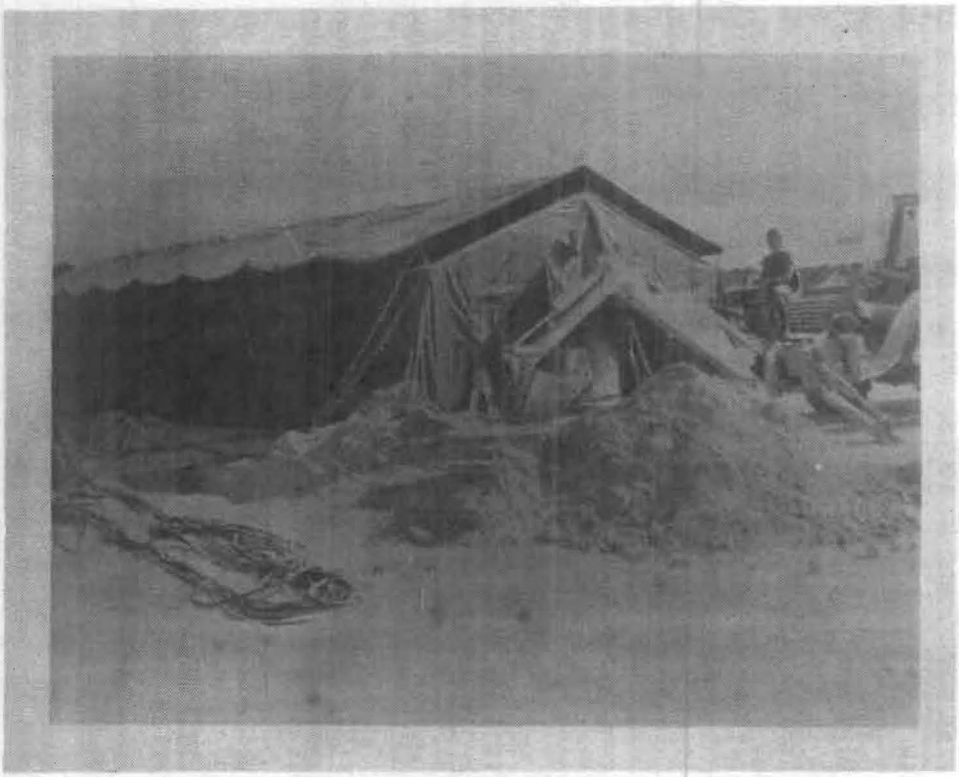
Start Date: 18 Nov 90
WIP percent at takeover: 92
WIP percent at turnover: 100
Completed Date: 23 Jan 91

5. Materials: Due to improper procurement of floor grout, the floor tile had to be reordered and reinstalled.

6. Engineering: NPE

7. Problem Areas: None

THIS PAGE LEFT INTENTIONALLY BLANK



BHO-906 47th Army Field Hospital

1. General: Provide site preparation and utility support for the construction of an Army Field Hospital. The work consisted of the installation of the outer perimeter security fence, construction of 3,000 ft of camp roads, a 250' x 250' helo pad, utilities, construction of four head facilities, and the forming and placing of 2,100 ft of sidewalks.

2. Direct Labor Expended: NMCB-7 - 321 MD
NMCB- 74 - 764 MD
Cumulative - 1085 MD

3. Composition of Work Force:

BU	CE	UT	SW	EO	EA
11	3	3	1	7	1

4. Status of Project: Turned over to PWC, Subic reserves, when detail personnel were recalled to main body to support construction projects in Saudi Arabia.

Start Date: 12 Nov 89
WIP at takeover: 60%
WIP at turnover: 87%
Completion Date: N/A

5. Materials: Fence, plumbing materials, and septic tank were not on site, which caused delays on the project.

6. Engineering: NPE

7. Problem Areas: None

BH1-907 Ship Store Storage Area

1. General: Renovate the interior of an existing facility to support a ships store. The work consisted of the taping and finishing of sheetrock, painting, installation of trim, interior wiring and suspended ceilings.

2. Direct Labor Expended: NMCB-7 - 79 MD
NMCB-74 - 109 MD
Cumulative - 188 MD

3. Composition of Work Force:

BU	SW	CE
4	1	1

4. Status of Project:

Start Date: 12 Nov 90
WIP percent at takeover: 70
WIP percent at turnover: 100
Completed: 2 Jan 91

5. Material: Floor tiles were purchased from two different lot numbers with two different shades of gray.

6. Engineering: NPE

7. Problem Areas: None

NO PHOTO AVAILABLE

BH1-909 ASU Security Barriers

1. General: Installed two prefabricated security barriers. The work consisted of cutting the asphalt surface at the gate to allow for the installation of the barriers.

2. Direct Labor Expended: NMCB-7 - 8 MD
NMCB-74 - 18 MD
Cumulative - 26 MD

3. Composition of Work Force: SW

2

4. Status of Project:

Start Date: 1 Dec 90
WIP percent at takeover: 40
WIP percent at turnover: 100
Completed: 19 Dec 90

5. Materials: NPE

6. Engineering: NPE

7. Problem Areas: Each gate had to be closed down for the work to take place. This dictated that the crews work around the busy traffic hours.

THIS PAGE LEFT INTENTIONALLY BLANK

SUPPLY AND LOGISTICS

Enclosure (5)

SUPPLY AND LOGISTICS

1. LESSONS LEARNED

a. Item. OPTAR funds

Discussion. OPTAR funding was provided via a series of funding increments and augments, which wasted time and duplicated work for battalion and CBPAC. Additionally, augments took too long to be received which required us to spend 'in the red'.

Recommendation. Provide full funding on a quarterly basis.

b. Item. Accounting

Discussion. Being supported through funding by the Marines as well as the Naval Construction Regiment, it was difficult to determine which authority funded different items.

Recommendation. Higher headquarters should provide guidance on what authority funds different items.

c. Item. Logistic Services Support

Discussion. It was extremely difficult to establish consistent reliable logistics support with BPA authority being 120 miles away from vendors and not having access to telephones.

Recommendation. The battalion, with strong Regimental support, must plan out logistics support thoroughly prior to moving to a forward area.

d. Item. USMC Supply System

Discussion. The requirement by I MEF for us to receive supplies and food service support from the Marines in our area of operation created confusion at times since the Marine supply system is different from the Navy's. Few of the battalion personnel have experience working with it.

Recommendation. Provide battalion supply personnel with basic training on the Marine Supply System.

e. Item. Disbursing operations.

Discussion. A forward area does not provide proper communication links to run a disbursing operation to support a battalion

Recommendation. DK's have to be located in a central area with a source of direct communications with Cleveland, Ohio.

1. Item. Alice Pack features.

Discussion. An actual contingency requires troops to carry a tactical Alice Pack consisting of CBR and infantry gear.

Recommendation. Include Alice Pack frames in the TOA.

2. NARRATIVE.

A. General Supply. The battalion's supply system carried its normal tasking throughout the deployment while operating in a remote area 120 miles away from the nearest supply point. The supply office managed three battalion OPTARS and four camp OPTARS, with a combined value of 1.3 million dollars. Additionally, over 9,000 requisitions were processed during the deployment, of which 273 were NORS/ANORS requisitions. An SK2 was sent to the city of Al Jubail as an expeditor to provide direct representation to acquire material from local vendors. Two SK's supported a detail in Bahrain which was supplied from the Administrative Support Unit in Manama.

B. Material Liason Office. The Material Liason Office was staffed with 5 people in the main body site in Saudi Arabia and two individuals with Detail One in Bahrain. The staff was responsible for hauling, tracking, ordering, and accounting for all material in Northeast Saudi Arabia and Kuwait. This involved establishing a joint USMC/Navy Class IV yard in the Ra's Al Mishab area. All materials used were transported from the industrial cities of Al Jubail and Dammam by battalion tractor trailers. The Class IV yard issued over 1.8 million board feet of lumber, 37 acres of plywood, and 12 tons of nails. The yard was also responsible for coordinating the delivery of 18,000 cubic meters of concrete and 25,000 cubic meters of select fill by local vendors.

C. Automotive Repair Parts. The Automotive Repair Parts Division had 1,992 additions, 1,025 line items deleted, 1,467 stock transfers, and 112 Navy Stock Number changes carrying 8,942 line items. Throughout the deployment ARP average, 350 issues, 192 DTO, and 18 NORS/ANDRS per week.

D. Central Tool Room. The Central Tool Room (CTR) functioned out of one tent and three CONEX boxes carrying shelf stock items and tool kits. A tool sharpening shop, an electrical shop, and a power tool maintenance shop. During the deployment, CTR actively sent tools to various details, conducted inventories, rebuilt and maintained TOA Air Echelon and Air Det tool kits, and surveyed $17,802 of broken tools.

E. Greens Issue. Greens Issue division was responsible for issuing all personnel combat gear used during hostilities. It was also responsible for continually keeping chemical suits and gas mask cannisters available to all personnel, while being responsible for the receipt, storage, issue, and inventory of all organizational gear.

F. Food Services. Food services was provided by 22 Mess Specialists and 14 augment personnel from the line companies. While in Bahrain the field mess provided three hot meals daily to 1,400 patrons, including Marine and Air Force personnel from nearby camps. The field galley was shifted to Saudi Arabia for the main body to feed up to 600 personnel and a branch galley was established to support a 65 man detail site. A special arrangement for a weekly resupply of

provisions was established with the FIRST Marine Expeditionary Force food services in Al Jubail, 120 miles away. Throughout the deployment the field mess served 4,350 cases of soda, 2,150 lbs of steaks, 1,750 lbs of coffee, 3,000 dozen fresh eggs, and 2,417 boxes of MRE's with a total of 346,800 meals served at a cost of over $700,000.

G. Disbursing. The Disbursing Office operated with a staff of five people. The office conducted business from Al Jubail for part of the deployment due to the communication needs with Cleveland. The Disbursing Officer provided check cashing services averaging $80,000 per month. Pay documents were submitted to the Defense Finance and Accounting Service to ensure each battalion member's pay was up to date. The office supplied a DK3 to provide check cashing services for NMCB 24 which did not have Disbursing clerks.

H. Laundry/Barbershop. Laundry services were provided by the battalion in conjunction with a contract with a local laundry services firm to ease the load on the battalion TOA laundry equipment and provide an option for battalion personnel. The Barbershop maintained an open door policy, allowing personnel to walk in at any time, visited job sites on request to perform hair cuts, and provided hours that were set around work hours. These actions resulted in over 3,000 haircuts being accomplished.

EQUIPMENT

Enclosure (6)

EQUIPMENT

1. LESSONS LEARNED.

a. Item. Maintenance Spaces

Discussion. Working conditions were very primitive. The mechanics worked in the cold, rain, mud and dust. AM-2 matting improved working conditions somewhat by giving the mechanics a smooth working surface and it also keeping parts out of the sand and mud.

Recommendation. AM-2 matting or other suitable material is necessary for the mechanics to work on. Consider including a working surface as a TOA item.

b. Item. Hauling Assets

Discussion. The battalion displaced approximately 230 miles and crossed national boundaries of Bahrain and Saudi Arabia. Our TOA contained 9 tractors (5 TN and 20 TN) and 11 lowboys. Our relocation required 130 tractor trailers over a 8 day period. Of these, 97 were commercially contracted tractor trailers. The mix included 40% highboy trailers and 60% lowboy trailers. Another problem encountered was the inability to move our organic 627 scrapers and MRS water truck and tank with battalion trailers since none were large enough. Similar problems were encountered when the battalion relocated from the Ra's Al Mishab area to Al Jubail at the end of the war. Due to the low priority assiged to the Seabee move, Marine contolled assets were unavailable for both moves. Without commercial haulers the battalion cannot relocate in a timely fashion.

Recommendation. The NCF must reasses the total numbers and types of haul vehicles in the TOA if it is expected that the Seabees are to be able to move and follow the ever changing battle lines of modern warfare.

c. Item. CESE compatibility.

Dicussion. Seabee TOA equipment being a mix of commercial and older tactical vehicles and equipment is not compatible with the organic equipment of the Marines we support. This incompatibility required us to procure parts through an independent supply system. Being located 120 miles from the nearest supply center resulted in the slow establishment of part replacement contracts. Mail from the United States took 16 to 20 days to reach the battalion and it made this avenue unpractical for critically needed parts. We were unable to interface and receive parts from the Marine Motor Transportation Units in the local area and take advantage of the Marine Corp 'float' programs

Recommendation. The NCF needs to review its CESE TOA and make it more compatable with the Marine equipment.

2. Narrative The Battalion Equipment Evaluation Program (BEEP) commenced on the fifth of December, a day after the Battalion's AP arrival. The three day BEEP with NMCB 7 only inventoried and inspected for safety items on a total of 284 pieces of CESE. All apparent major discrepancies were noted for future repairs. An average cost per unit of CESE was not determined due to the time constraint of the turnover. A low availability with a high deadline was due to the harsh desert environment, working the equipment around the clock seven day

s a week, and the long lead time it took to get certain repair parts. To keep the equipment operating and in the field up to seven field crews were utilized around the clock to preform basic repairs at work and detail sites. Due to the heavy horizontal tasking, harsh environment, 24 hour operations, and multiple detail sites, 22 pieces of civilian equipment was used to augment the battalion's TOA equipment. The augment equipment consisted of motor graders, water distributors, front end loaders, and electrical generators. Due to the UIC change the DTO clerk researched and reordered parts that were ordered in Japan. Seventeen fuel systems were either rebuilt or replaced to use Jet A-1 fuel as a substitute for diesel fuel. The replacement or repair of transfer cases and transmissions in commercial vehicles totaled 10. The pickups and blazers, our major means of transportation, suffered from constant cranking and charging system problems. The in-house manufacturing of parts was a constant task. As an example one Case 1150 dozer wrist pin was rebuilt as was a Detroit V8-71 piston for the MRS water distributor. The tire shop replaced 236 tires and repaired another 196.

TOTAL NUMBER OF PMS

A	B	C	OTHERS (04 REPAIRS)
86	259	0	265

Total average number of TOA equipment: 284

Total number of non TOA equipment: 22

Maintenance cost for the deployment: #186,055.80

Availability for the deployment: 81.85%

PM to interim ratio for the report: 1.63:1

Mechanic to equipment ratio: 1 to 6.95

STATUS OF ASSIGNED EQUIPMENT IN SERVICE

	BEEP	DEC	JAN	FEB	MAR	APR
Assigned	264	284	306	306	306	278
Deadline		11	22	21	19	21
% Availability		85.00	81.00	77.65	76.59	89.01

PM AND ITERIM REPAIR ERO SUMMARY

MONTH	REPAIRS	TYPE A	TYPE B	TYPE C	TOTAL	PM TO INTERIM ACTION
Dec	35	1	34		70	1:1
Jan	75	14	111		200	1.66:1
Feb	68	27	92		187	1.75:1
Mar	52	94	45		191	2.67:1
Apr	33	16	20		69	1.09:1

Note:
Due to completion of projects and the requirements to begin preparing CESE for shipment back to the States standard PM's were stopped as of 30 April. Only repairs required to be able to load equipment onto ships were accomplished.

CAMP MAINTENANCE

Enclosure (7)

CAMP MAINTENANCE

1. LESSONS LEARNED

a. Item. Berthing and Facility Tents

Discussion. The TOA does not accomodate a wartime scenerio which requires a battalion to have multiple details away from the main body. The number of tents was insufficient to accomodate troop berthing, administrative and shop facilities, and service areas away from mainbody.

Recommendation. Revise the number of tents in the TOA for contingency operations.

b. Item. Potable Water Support

Discussion. Water had to be obtained from Marine Corps ROPU units which were set up in the Port of Ra's Al Mish'ab located eight miles from the Seabee camp. Marine Corp PMT's would only allow the transportation of potable water in stainless steel tanks which are not on the 'new' water distributors in the TOA. This severly limits the capability to transport potable water. Due to this requirement, only two potable water vehicles were available to carry water for consumption.

Recommendation. Increase the number of stainless steel potable water trucks.

c. Item. Electrical Generators

Discussion. All Seabee generators units are skid mounted which limits mobility. The KW rating of the present equipment severely limits power availability and flexibility for field use.

Recommendation. Incorporate trailer mounted generators to provide easier mobility of the units. Increase the number of and wider range of generators, for example 2 - 60 KW, 1 - 90 KW, and 1 - 150 KW, to allow more flexibility to support smaller detail sites.

d. Item. Shower facilities, tent heaters, and laundry operations.

Discussion. The existing shower facilities were unreliable and were constantly out of service due to malfunctions. Tent heaters were old, dating from WWII, and their use posed a fire hazard. The washing machine and dryer were also ineffective due to the amount of time they were down for maintenance and the constant oil leaks inside the heating chambers.

Recommendation. Shower facilities should be replaced with new modular field shower kits; tent heaters should be replaced by newer heating units for safety and maintenance; and the laundry units should be replaced with mobile high capacity, industrial laundry units.

2. Narrative. The camp maintenance organization varied from the COMCBPACINST 11014.1C as it was tailored for expedient and quick contingency work. NMCB 74 was moved from an established camp in Bahrain to an undeveloped virgin desert area approximately 20 miles south of Al Khafji on Saudi Arabia's northeast coast. Once the initial set up of the camp was completed, a maintenance plan was developed to suit the unique conditions. The camp consisted of 48 pits dug five feet deep and bermed in a horse shoe configuration which would provide protection from indirect fire. Each pit contained two 16' x 32' GP tents with approximately ten personnel per tent. All administrative functions were conducted from 12 strongback tents also dug inside pits. The galley facility evolved from two 40' x 100' circus tents to a 40' x 116' SWA Hut galley and a 40' x 100' strongback divided for food storage and a crew lounge. The electrical power was generated by two, 200 KW civilian generators that were leased to the Navy. An auxilary 30 KW generator supplied emergency power to vital facilities in case of an emergency. Aside from key facilities, there were two shower tents and two prefabricated open showers which operated for two days a week during hostilities due to water rationing. Grey water was collected in leach fields and the trash was burned in a burn pit outside of the camp. A total of 26 four-hole head units were used of the ABFC P-437 design. The waste was either removed by a contractor or the half drums would be removed and burned each day.

THIS PAGE LEFT INTENTIONALLY BLANK

CONTINGENCY OPERATIONS

Enclosure (8)

CONTINGENCY OPERATIONS

1. LESSONS LEARNED

a. Item. Use of C130 aircraft.

Discussion. Air assets were used to move personnel and ammunition from Bahrain to Saudi Arabia saving space and time in a tactical mount-out.

Recommendation. Continue the use of cargo aircraft in tactical relocations.

2. Narrative.

A. The camp in Ra's Al Mish'ab had a perimeter security plan and a defense plan. A security company, composed of 56 personnel, was in charge of the perimeter and gate security in addition to being a reaction force. For security and protection of personnel within the camp a total of four 10' x 12' hardened Company Command posts bunkers, 34 hardened personnel 'L' shaped trenches, and four mortar pits were constructed. Two-man fighting positions, M-60 and M-50 machine gun emplacements were also constructed in the bermed perimeter to allow 360 degree defense of the camp during high threat alert conditions. A 24' x 40' timber COC bunker was constructed adjacent to the administrative area in a central location. The COC incorporated the battalion communication center, FDC, CBR Command Post and tracking displays. The equipment in the Alpha company yard was dispersed tactically throughout a large area. Mortar pits were located to cover all coordinate points and were connected to the FDC. A bermed area inside the camp housed an Ammunition Supply Point composed of two MILVANS with palletized ammunition.

B. From our initial arrival to the end of hostilities, security teams were organized inside each of the companies to provide on site security to all projects and road crews against terrorist or organized attacks. This practice proved to be effective during the construction of the Marine Supply Route when one night a group of unidentified soldiers wandered onto the job site. The security quickly captured these unidentified personnel, preventing the potential loss of life and equipment.

C. The battalion was involved in two distinctive operations before and after the ground campaign. From 15 February to 21 February, a 21 man detail was tasked with constructing, delivering, and assembling tank and artillery decoys in conjuction with a Joint Services Task Force, Task Force Troy, in a deception operation, code named Operation Flail. The decoys were pre-fabricated inside the camp a month prior to the detail's departure and were assembled during multiple night incursions inside the Iraqi patrolling area along the Kuwait-Saudi Arabia border.

D. After the ground war, from 4 March to 6 March, a 25 man detail was sent to the border town of Al Khafji to remove obstacles and fill craters along the main coastal highway into Kuwait. Obstacles such as oil pipes, anti tank barricades, and bomb craters obstructed the only usable lanes to resupply Coalition Forces.

E. A delayed party of 109 personnel remained in Saudi Arabia, from 8 May 91 to 13 June 91, to complete camp clean up and closure, final preparations of TOA for shipment to the United States and the loading of this equipment onto ships. The personnel loaded out two complete TOA's with one being transported to the west coast and one to the east coast.