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AUTHORITY

AGO D/A ltr, 29 Apr 1980

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DEPARTMENT OF THE ARMY  
OFFICE OF THE ADJUTANT GENERAL  
WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGDA (M) (3 Oct 69)

FOR OT-UT-693036


8 October 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 84th Engineer Battalion, Period Ending 31 July 1969

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2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

  
ROBERT E. LYNCH  
Colonel, AGC  
Acting The Adjutant General

1 Incl  
as

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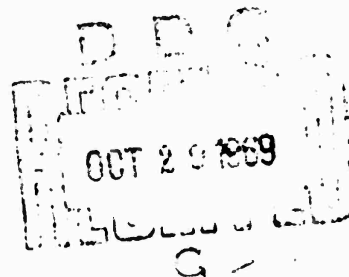
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AD 860632

DEPARTMENT OF THE ARMY  
HEADQUARTERS, 84TH ENGINEER BATTALION (CONSTRUCTION)  
APO 96238

EGCC-00

14 August 1969

SUBJECT: Operational Report of the 84th Engineer Battalion  
(Construction) for the period ending 31 July 1969, RCS  
CSFOR-65 (RI)

THRU: Commanding Officer  
937th Engineer Group (Combat)  
APO 96318

Commanding General  
18th Engineer Brigade  
ATTN: AVBC-C  
APO 96377

Commanding General  
United States Army Vietnam  
ATTN: AVHGC-DST  
APO 96375

Commander in Chief  
United States Army, Pacific  
ATTN: GPOP-DT  
APO 96558

TO: Assistant Chief of Staff for Force Development  
Department of the Army (ACSFOR-DA)  
Washington, D.C. 20310

FOR OT UT  
693036  
Inclosure

EGCC-CO

14 August 1969

SUBJECT: Operational Report of the 84th Engineer Battalion  
(Construction) for the Period Ending 31 July 1969, RCS  
CSFOR-65 (R1)

1. Section 1 Significant Organizations or Unit Activities:

a. Command:

(1) Organization:

(a) Headquarters & Headquarters Company, 84th Engr Bn (Const)

(b) Company A, 84th Engr Bn (Const)

(c) Company B, 84th Engr Bn (Const)

(d) Company C, 84th Engr Bn (Const)

(e) Company D, 84th Engr Bn (Const)

(f) 536th Engr Det (FC)

(g) 585th Dump Truck Company has been attached to this Battalion since 12 July 1969.

(h) Company B, 299th Engr Bn (C) was dropped from OPCON of this Headquarters on 8 June 1969.

(i) Ad Hoc Power Distribution Team Assigned to HHC/84th.

(2) Unit Operations:

(a) Headquarters and Headquarters Co, provided command, planning, direction, coordination and control to all subordinate units. Several units and attached units are located in outlying areas away from the Headquarters. The problems encountered here were communications (telephone) and added security requirements for small convoys and couriers operation between the Units and this Headquarters.

(b) Company A operated the crusher and Quarry complex at Chop Chai. During this quarter approximately 36,000 cubic yards of rock were crushed expending 18,000 man hours. The asphalt crew of Company A expended 310 man hours on QL-1. This included shooting 11,410 gallons of MC-70 and placing 615 tons of hot mix.

Incl

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(c) Company D has been upgrading a 25 KM section of QL-1 extending from Tuy Hoa to Tuy An. This project is approximately 45% complete with 16.3 KM of subbase prepared and 3.9KM of base course placed. This Company has also been burying parallel 6" and 8" POL pipelines from Tuy Hoa to CQ 242275. This project was begun on 9 June 1969. Since that time 59420 feet of the parallel 6" and 8" pipelines has been completed. This places the project at 59% complete.

(d) Company C concentrated its efforts on base construction type projects within the Qui Nhon Area. Company C completed the 440' x 80' Cold Storage Warehouse on 20 June 1969. The MER project for 173d AB Bde at Cha Rang which consisted of 6 ea field showers, 7 ea burn-out latrines and 40' x 140' mess hall slab was completed. The MER project for 173d at Phu Tai, which consisted of 5 ea field showers, 7 ea burn-out latrines, 40' x 40' mess hall slab and grading and stabilization necessary to accommodate unframed tentage is complete less plumbing for field showers which is not available at this time. Pipeline "Golf" was cleared of blockage to provide a minimum flow rate of 1,000 bbl per hour, the security lighting for Lane Army Airfield is complete less 25 light fixtures which are not available at this time. LOC Restoration on QL-1 is progressing well with 97% of the work completed. Full effort is being expended on Ammo Off Loading project with 600' sheet pile bulkhead backfilled with sand and concrete placed in 50% of 600' x 80' barge wharf. The POW Hospital which is being built by D Company with equipment and administrative support from C Company is 75% complete. The work on Class II & IV Warehouse is at a stop because personnel were sent to assist B Company on the pipeline project, which has a higher priority. The warehouses are 95% complete. At Camp Williams two new guard towers complete with lower sleeping deck were constructed to replace two old towers.

(e) Company D has been primarily responsible for the living environment of A and D Companys at Tuy Hoa North. D Company has recently built the A Company MER and has completed 38% of the Battalion Headquarters Cantonment. With the attachment of the 585th Dump Truck Company to the 84th Engineer Battalion in July, D Company began constructing the MER for the 585th. D Company has also been constructing the Chop Chai Quarry and crusher site. The crusher and quarry is manned by A Company. Company D is also working on the LOC upgrade from Tuy Hoa to Tuy An. This Company has a platoon attached to Company C for work on the POW Hospital.

(f) The 536th Engr Det (PC) principally worked on the Ammo Barge Off-Loading Facility. This project is 85% complete. The 536th has only the fender system to complete. Company C is doing the earthwork for the project. The 536th also completed repair of the Barge Quay at Qui Nhon this quarter.

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(g) The 585th Dump Truck Company has been attached to this Battalion since 12 July. The primary function of this Company has been to haul base course to the QL-1 project extending for 25KM from Tuy Hoa to Tuy An. 10,000 cubic yards of base course have been hauled with 3:9 KM of base course placed. The 585th has also hauled pipeline and other materials in support of the POL Pipeline Operation. This Company also supports Companies A, B and D in miscellaneous hauling operations.

b. Personnel, Administration, Morale and Discipline: During the reporting period, there was a total of 46 personnel recommended for awards, and 56 personnel voluntarily extended their foreign service tour. This Battalion suffered three casualties, including one KIA, during this Quarter. There were 80 disciplinary cases, 53 Article 15's, 25 Special Courts-Martial, and one General Courts-Martial.

c. Intelligence and Counterintelligence: Enemy activity throughout the Battalion's AOR was light. One minor stand-off B-40 rocket attack on Chop Chai Quarry resulted in 1 US KIA and 2 US WIA. One other light mortar attack on Tuy Hoa North Compound resulted in negative casualties or damage. Enemy harrassment of work parties and LOC's consisted of eight reportable incidents of sniper fires and minings resulting in no casualties and minor damage. During the enemy spring/summer campaign and the six week lull in enemy activity from mid June to the end of July, good intelligence continued to be maintained by this unit with the Capital ROK Infantry Division, 22nd ARVN Infantry Division, 173rd Airborne Brigade, Binh Dinh and Phu Yen Province MACV Advisors and VN Forces, and other combat and combat support units in the Battalion's AOR.

d. Plans, Operations, and Training: The highest priority project during this reporting period has been the POL pipeline at Tuy Hoa. B Company and 2nd platoon of C Company have been working on this project during the latter part of the quarter. Two major projects are QL-1 Upgrade, Tuy An to Tuy Hoa (assigned to Company B and Company D), and QL-1 upgrade, Phu Tai to Binh Thanh (assigned to Company C). All companies are responsible for LOC maintenance in the Battalion's AOR which extends from Binh Thanh to Vung Ro. Base construction, mainly in the Qui Nhon Area, is being done by Company C with attachments from D Company. Most present projects should be completed during the next quarter. Training emphasis during this reporting period was on OJT and crosstraining of newly assigned personnel. Safety training and weapons firing was conducted.

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e. Logistics: During the past Quarter, the S-4 section gave logistical support to the five organic companies of the 84th Engineer Battalion (Construction), its attached unit, the 536th Engr Det (IC), and the 585th Dump Truck Company, which has been attached to this unit since 12 July. The areas of logistical support include:

(1) Class A rations for some 900 personnel each day, procured and distributed by the ration break down facility.

(2) Two (2) water points which together produce approximately 40,000 gal of potable water daily.

(3) POL delivery to all organic and attached units amounting to 37,000 gal of Mogas and 42,000 gal of diesel fuel per month.

(4) Supply of Class IV Construction Materials to all units for MCA funded projects. An average of 350 requisitions for construction materials are processed each week by the BOM section of S-4.

(5) Supply of Class II TOE equipment. An average of 150 requisitions for expendable and non-expendable equipment and supplies are processed by the property book section each week. The Quarter showed an influx of approximately 180 new pieces of equipment, both TOE and MCA.

(6) Resupply of unit basic loads and demolitions through the Phu Tai ASP. An average of 10,000 lb of dynamite are used each month for quarry operations.

f. Force Development: N/A

g. Command Management: N/A

h. Inspector General: N/A

i. Civic Action: This Battalion undertook a variety of Civic Action Projects during this quarter. Voluntary contributions totaling \$VN 84,800 were made by members of this Battalion. This money was distributed among several orphanages and was used for a dispensary at the Buddhist Refugee Center at Tuy Hoa and construction of an incinerator at Province Hospital. As part of the Civic Action Program the following scrap materials were distributed to various orphanages, schools and refugee centers: 290 bags of cement, 2094 BF of lumber, 50 drums of AP-3, 30 ft 20"  $\varnothing$  CMP, and 30 pieces 36" CMP. This Battalion spent approximately 42 man days for Civic Action Projects.

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2. Section 2: Observations (Lessons Learned)

a. Personnel: None

b. Operations:

(1) Item: Straightening Trusses

Observation: Badly bent truss for Rheem Dudley Building

Evaluation: The truss was needed badly to complete building, we decided it could be repaired with torch, welder, and steel plate.

Recommendation: The web part of the truss was repaired by cutting out the bent section and replacing it with the same thickness sheet metal (1/8"). The flange of the truss was both twisted and bent. The twisted part was cut off, straightened, and welded back on, all of the welds were made with extra beads to ensure proper strength was maintained. The bent portion of the flange was straightened by heating and hammering back to the original form. Care was taken not to heat the truss too much causing it to lose its temper resulting in a loss of strength.

(2) Item: Forming Concrete Curb

Observation: Need to place forms for 3" x 4" curbing inside warehouse without damage to finished concrete floor.

Evaluation: It was decided we could do it by attaching forms to weighted plywood base.

Recommendation: The forms were kept stationary by fastening pieces of plywood on the bottom of the forms and placing sandbags on top of the plywood. The form work made in this manner could be placed and removed with minimum effort and no damage to finished floor.

(3) Item: Oversized rock stopping production

Observation: When using towed aggregate spreader, oversized rock was blocking it up and stopping production. Even one large rock every couple of hours was very frustrating.

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GSFOR-65 (R1)

Evaluation: A method of taking out the oversized rock had to be found.

Recommendation: This problem was eliminated by placing a piece of crusher screen over the spreader hopper and feeding the rock through it. This prevents rocks that are too large from stopping production.

(4) Item: Correctly insulating cable junctions.

Observation: In the process of connecting a 100 KW generator to our buried power cable, difficulty was experienced in insulating the heavy cable properly.

Evaluation: A method had to be found to insulate the heavy cable.

Recommendation: The problem was overcome by wrapping each junction with electrical tape and placing it in a paper milk carton with AP-3 in it. When the AP-3 cooled it could be buried safely. It also served as a good water proofing substance in each exposed end of the pipe.

(5) Item: Easy placement of fence

Observation: In putting up chain link fence in hard to get at areas, unrolling and putting up the fence as needed was awkward and difficult.

Evaluation: A method had to be found to facilitate putting up the fence.

Recommendation: This problem was eliminated by unrolling the chain link fence on the ground and then hand carrying with approximately 10 men to the area desired.

(6) Item: Easy placement of fence posts.

Observation: Placing fence posts is a time consuming job.

Evaluation: A method should be found to facilitate this job.

Recommendation: This problem was solved by having a bucket loader push the fence posts into the ground.

(7) Item: Digging post holes in sand.

Observation: When digging a post hole in sand the sides often slide back into the hole.

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S... - 5 (10)

**Evaluation:** A method should be found to keep the side from caving in

**Recommendation:** This problem was solved by capping the area with laterite at least 6" thick and wetting down the area in which the hole is to be dug. The laterite compacts the sand and the water will hold the sand together.

(8) Item: Longer wearing of tires.

**Observation:** Tires are often destroyed by sharp rock punctures.

**Evaluation:** A way should be found to reduce the number of these punctures.

**Recommendation:** Reduction of the tire pressure below regular tire pressure has been found to increase the life of the tire on rough roads.

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- c. Training: None
- d. Intelligence: None
- e. Logistics: None
- f. Organization: None
- g. Other: None

*William Y. Epling*  
WILLIAM Y. EPLING  
LTC, CE  
Commanding

DISTRIBUTION:

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- 8 Copies to 18th Engr Bde
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EGC-CU(31 July 69) 1st Ind

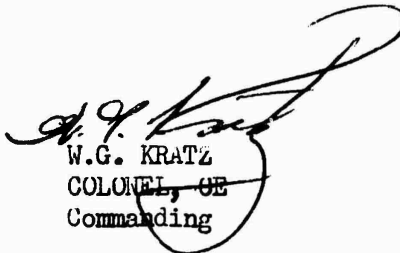
SUBJECT: Operational Report of Lessons Learned for the Period 1 May 1969 thru 31 July 1969.

DA, HEADQUARTERS, 937TH ENGINEER GROUP (COMBAT) APO 96318, 23 August 1969.

TO: Commanding General, 18th Engineer Brigade, ATTN AVCB-CB, APO 96377.

1. The subject report, submitted by the 84th Engineer Battalion (Construction) has been reviewed and is considered a well compiled report of organization activities.

2. I concur with the observation and recommendations of the Battalion Commander.

  
W.G. KRATZ  
COLONEL, ~~SE~~  
Commanding

AVBC-CG (14 Aug 69) 2nd Ind  
SUBJECT: Operational Report of the 84th Engineer Battalion (Const) for  
the Period Ending 31 July 1969, RCS CSFOR-65 (R1)

DA, HEADQUARTERS, 18TH ENGINEER BRIGADE, APO 96377 1 SEP 1969

TO: Commanding General, U.S. Army Vietnam, ATTN: AVHGC-DST, APO 96375

1. This headquarters has reviewed the Operational Report - Lessons Learned for the 84th Engineer Battalion (Const), as indorsed by the 937th Engineer Group (Combat). The report is considered to be an excellent account of the Battalion's activities during the reporting period.
2. This headquarters concurs with the observations and recommendations of the Battalion and Group Commanders.

*J. W. Morris*  
J. W. MORRIS  
BG, USA  
Commanding

CF:  
1 - CO, 937th Engr Gp  
1 - CO, 84th Engr Bn

AVHGC-DST (14 Aug 69) 3d Ind

SUBJECT: Operational Report of the 84th Engineer Battalion (Construction) for  
the period ending 31 July 1969, RCS CSFOR-65 (R1)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 13 SEP 1969

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,  
APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned  
for the quarterly period ending 31 July 1969 from Headquarters, 84th  
Engineer Battalion (Construction).

2. Reference item concerning "Correctly insulating cable junctions," section  
II, page 7, paragraph 2b(4); concur. This method is acceptable for voltage  
potentials below 11,000 volts. A plastic compound should be used with poten-  
tials above 11,000 volts. In either case an epoxy splice kit should be used  
if available.

FOR THE COMMANDER:

Cy furn:  
84th Engr Bn  
18th Engr Bde

  
B. A. GOODWIN  
CPT, AGC  
Assistant Adjutant General

GJOP-DT (14 Aug 69) 4th Ind  
SUBJECT: Operational Report of HQ, 84th Engineer Battalion  
(Construction) for Period Ending 31 July 1969,  
RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 24 SEP 69

TO: Assistant Chief of Staff for Force Development,  
Department of the Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:



D. A. TUCKER  
CPT. AGC  
ASST AG

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