

UNCLASSIFIED

AD NUMBER
AD872529
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Critical Technology; 28 JUL 1970. Other requests shall be referred to Dept. of the Army, Office of the Adjutant General, Washington DC 20310.
AUTHORITY
OAG D/A ltr, 29 Apr 1980

THIS PAGE IS UNCLASSIFIED

THIS REPORT HAS BEEN DELIMITED
AND CLEARED FOR PUBLIC RELEASE
UNDER DOD DIRECTIVE 5200.20 AND
NO RESTRICTIONS ARE IMPOSED UPON
ITS USE AND DISCLOSURE.

DISTRIBUTION STATEMENT A

APPROVED FOR PUBLIC RELEASE,
DISTRIBUTION UNLIMITED.

DISTRIBUTION (Cont'd)

Chief of Research and Development

Assistant Chiefs of Staff

Chief of Engineers

Commandant of the Marine Corps

Defense Documentation Center

USAF Project RAND

Commanding Officers

US Army Limited War Laboratory

US Army Logistics, Doctrine Systems & Readiness Agency

US Army Construction Engineering Research Laboratory

US Army Mobility Equipment Research & Development Center

93d Engineer Battalion

SEARCHED	INDEXED
SERIALIZED	FILED
MAY 1964	
FBI - WASH DC	
2	

FOR OFFICIAL USE ONLY



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

18

IN REPLY REFER TO

AGDA (M) (24 Jul 70) FOR OT UT 702067 28 July 1970

SUBJECT: Operational Report - Lessons Learned, Headquarters, 93d Engineer Battalion, Period Ending 30 April 1970

SEE DISTRIBUTION

This document is subject to standard export controls and each transmittal to foreign government or foreign nationals may be made only with prior approval of _____

1. Subject report is forwarded for review and evaluation in accordance with paragraph 4b, AR 525-15. Information of actions initiated as a result of subject report should be forwarded to ACSFOR OT UT within 90 days of receipt of covering letter.

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.

ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

1 Incl
as

DISTRIBUTION:

- Commanding Generals
 - US Continental Army Command
 - US Army Combat Developments Command
- Commandants
 - US Army War College
 - US Army Command and General Staff College
 - US Army Armor School
 - US Army Aviation School
 - US Army Engineer School
 - US Army Field Artillery School
 - US Army Infantry School
 - US Army Ordnance School
 - US Army Transportation School

Copies furnished:
Office, Chief of Staff, US Army
Deputy Chiefs of Staff

D D C
[Stamp]
[Signature]

Protective marking cancelled when separated from inclosure.

UNCLASSIFIED REPORT
DISTRIBUTION NO FOREIGN WITHOUT APPROVAL OF
ASSISTANT CHIEF OF STAFF FOR FORCE DEVELOPMENT
(ARMY) ATTN: FOR OT UT, WASHINGTON, D.C. 20310

AD No. — AD872529
DDG FILE COPY

FOR OFFICIAL USE ONLY

13

DEPARTMENT OF THE ARMY
HEADQUARTERS, 93RD ENGINEER BATTALION (CONST)
APO SAN FRANCISCO 96371

EGFB-OP

16 May 1970

SUBJECT: Operational Report of Lessons Learned 93rd Engineer
Battalion (Const) for Period Ending 30 April 1970
RCS CS FOR - 65(R2)

CINCUSARPAC, ATTN: GPOP-DT, APO San Francisco 96558
Commanding General, USARV, ATTN: AVHCC-DST, APO San Francisco 96375
Commanding Officer, 20th Engr Bde, ATTN: AVRI-OS, APO San Francisco 96491
Commanding Officer, 34th Engr Gp ATTN: EGF-OP APO San Francisco 96320

1. Section I, Operations: Significant Activities:

The battalion remained assigned to the 34th Engineer Group (Const), 20th Engineer Brigade through the reporting period. The Battalion Headquarters and A Company remained at Dong Tam Base, RVN (XS 4744) throughout the reporting period. B Company remained at My Binh Base camp (XS 7249). Battalion organization is as shown in inclosure one.

One platoon of the 67th Engineer Company (Dump Truck) remained attached to the battalion in support of the LOC TL-24 Road Program.

Since this reporting period is completely within the dry season, maximum effort has been directed toward road building. B Company has the responsibility for the west 10,500 meters of LOC TL-24. Work on this project throughout this period has proceeded on schedule with:

Ton of Asphalt Laid	5,223
Bags of Lime Placed	4,700
CU YD Sand Fill	7,640
CU YD Rock Fill	11,215
Lineal FT of Culvert Placed	964

D Company has the responsibility for the East 23,500 meters of LOC TL-24. In support of this project D Company operates an off-load site at Dong Son, RVN. Work on this section of TL-24 has fallen behind because of non-availability of material. Rock for this section of the road is barged to Dong Son from Vung Tau and has fallen far below the specified quota. Work on this section included:

FOR OFFICIAL USE ONLY

PROTECTIVE MARKING MAY BE REMOVED 15 MAY 1973

FOR OT UT
702067
Inclosure

EGFB-OP

SUBJECT: Operational Report of Lessons Learned, 93rd Engineer Battalion (Const)
for Period Ending 30 April 1970 RCS CS FOR - 65(R2)

Completion of all Subgrade	
CU YD of Rock	13,474
Number of Culverts Placed	20

C Company has been tasked with upgrading 71 kilometers of secondary roads in Long An Province to include: Widening and raising existing roadways, opening new roads, and building the required bridges. There are 8 bridges in this project and 8 roads, Progress on this Project includes:

130 FT Bailey Triple Single	
180 FT Bailey Double Triple	
70 FT Bailey Single Single	
70 FT Bailey Single Single	
43 KM of Roadway complete	
CU YD Clay hauled & Stockpiled	43,700
CU YD Laterite Placed	3,000
CU YD Rock Placed	260

All other projects this period were secondary to the road projects and were accomplished with men and equipment not essential to the road programs. These projects are listed below.

a. OSD 291-5990-1-21 Ben Tre Airfield Runway Repair. 1700 FT of runway needs to be taken up and the subgrade repaired. This project is now 25% complete.

b. OSD 210-6051-0-20 Ben Tre Airfield Refuel and Rearm Facility. This project consists of constructing 6 refuel pads, 3 rearm pads with revetments, and 2 rearm storage points. This project is now 70% complete.

c. OSD 225-5733-0-20 Tan An Airfield Protective Berm. This project consists of completing a perimeter berm around the airfield compound. The work is 70% complete.

d. OSD 225-60 -0-20 Minesweep Support. This is a continuous project. It consists of sweeping both sides of OL-4 for RMK-BRJ contractors wherever RMK-BRJ is working.

2. LESSONS LEARNED: Commanders Observation, Evaluation, and Recommendations:

a. Personnel:

(1) Unit Strength Versus Unit Requirements

(a) Observation: A reduced TOE strength compounded by understrength from authorized, is a severe problem.

(b) Evaluation: The units TOE strength has been greatly reduced by replacing many US operators with local nationals. These slot deletions are only on paper because no qualified local nationals are available. This situation requires that the already understrength unit operate all its equipment with other than MOS operators. This situation makes every equipment operator critical and therefore hampers other duties normally performed by military personnel.

FOR OFFICIAL USE ONLY

INCL

EGFB-OP

SUBJECT: Operational Report of Lessons Learned, 93rd Engineer Battalion (Const)
for Period Ending 30 April 1970
RCS CS FOR - 65(R2)

(c) Recommendation: The only feasible way to relieve this problem is to change the MTOE to authorize equipment operators previously deleted and also to supply personnel to bring the unit's strength up to authorized.

b. Intelligence: None

c. Operations:

(1) Moisture Control in Clay compaction

(a) Observation: It was found to be inefficient to compact long lengths of clay fill in road construction.

(b) Evaluation: Moisture control is very difficult when compacting large areas of clay. The time required for the compaction effort produces variations in moisture content.

(c) Recommendation: By compacting 300 meters or less of clay fill at a time, moisture control becomes much less of a problem. Although this method seems less efficient on first analysis the time and effort saved by not recompacting large sections if specifications are not met the first time far outweighs the disadvantages.

(2) Preparation of Base Course

(a) Observation: An optimum size aggregate for base course would be 1½ inch (minus) rock with a high percentage of fines. If this desired rock is not available, and a larger size (3 inch minus) must be substituted, a problem arises when grading and compacting the base and proper compaction will not be obtained.

(b) Evaluation: Fines must be replaced, in some manner to obtain compaction.

(c) Recommendation: Sand may be supplemented with the 3 inch (minus) rock. The sand is spread on the rock, and mixed by windrowing the rock and sand from side to side. Water must be added to retain the sand, and windrowing must not be overdone. Once the rock has been "choked" and rolled, and proper OMC is reached, the surface should receive a treatment of MC or RC 800 with diesel added at a 3:1 ratio.

(3) Traffic Control During Paving Operations

(a) Observation: Traffic control during a road construction project is essential, but difficult in most instances. During blue top and paving operations it is necessary to retain proper grade, therefore traffic must be slowed and diverted from the road surface.

FOR OFFICIAL USE ONLY

INCL

EGFB-OP

SUBJECT: Operational Report of Lessons Learned, 93rd Engineer Battalion
(Const) for Period Ending 30 April 1970
RCS CS FOR - 65(R2)

(b) Evaluation: A slow traffic pattern must be established to prevent lost time or maintenance of work previously accomplished.

(c) Recommendation: Signs and guards, as well as OC and National Police are helpful. Road signs diverting traffic from pavement or blue top work will aid, but must be supplemented by personnel. It has been found that one way traffic controlled by a pace vehicle to eliminate speeding, along with communication at both ends has been a possible solution. A minimum amount of personnel, and one pace vehicle will do a more effective job.

(4) Construction of required slope on embankments

(a) Observation: Sand and clay embankments must be sloped at required ratios to provide drainage without erosions. This can be a time consuming construction operation if experienced grader or dozer operators are not available.

(b) Evaluation: A fairly simple method of sloping embankments must be established, due to inexperienced operators.

(c) Recommendation: When necessary space is available, a D7E dozer may be utilized to slope the embankments. The dozer pushes fill, while operating perpendicular to the existing road, at the required ratio. This does not require an experienced operator, but the operator must be cautioned not to exceed the right of way boundaries.

(5) Borrow Pit Operations

(a) Observation: The OMC of clay restricts the depth at which scrapers may load. Water-levels, in the Mekong Delta, are less than one meter from the surface. Therefore, clay will be far above the proper OMC, and will hamper compaction operations. Secondly single borrow pits are not readily available, the maximum amount of clay must be attained to facilitate road construction.

(b) Evaluation: A method of extracting clay from borrow pits must be established in order to obtain the maximum clay fill from the borrow area.

(c) Recommendation: By instructing scraper operators to open the pan a maximum of 3 inches, the partially dried surface clay will be obtained for fill. Then, leaving the newly uncovered clay to dry, the scrapers move to an adjacent area to perform the identical task. After few hours of drying, the operators may return to the initial area and load the top 3 inches of dried clay.

FOR OFFICIAL USE ONLY

EGFB-OP

SUBJECT: Operational Report of Lessons Learned, 93rd Engineer Battalion (Const)
for Period Ending 30 April 1970
RCS CS FOR - 65(R2)

d. Organization: None

e. Training: None

f. Logistics:

(1) Generators

(a) Observation: A line company does not have proper TOE generators to provide proper power for its function and security.

(b) Evaluation: Five and ten KW generators have been used for long hours at maximum loads with unfavorable results. No perimeter or emergency lighting is possible. Many electrical facilities that are usually available in a base camp are not possible.

(c) Recommendation: A line company that is entirely responsible for its own perimeter and security without ready access to support should be augmented with minimum of two 30 KW generators.

g. Communications: None

h. Material: None

i. Other: None

3 Incl
as
Incl 2 & 3 wd, HQ DA

Michael E. Kallman
MICHAEL E. KALLMAN
LTC, CE
Commanding

FOR OFFICIAL USE ONLY

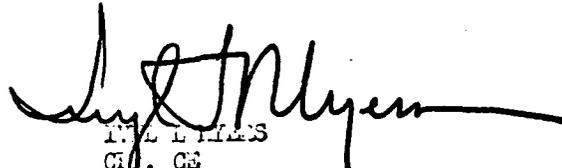
DAF-DA (21 May 70) 1st Ind
SUBJECT: Operational Report of 93rd Engineer Battalion for Period Ending
30 April 1970, ACG CEFOM-65 (12)

DA, HEADQUARTERS 34TH ENGINEER GROUP (CONST), AFO 96320 21 May 70

TO: Assistant Chief of Staff for Force Development, Department of the Army
Washington, D.C. 20310
Commanding Officer, 20th Engineer Brigade, AFTH: AVBI-CS, AFO 96491

The attached GILL of the 93rd Engineer Battalion has been reviewed and is
considered valuable for documentation and review.

FOR THE COMMANDER:


T. L. MILES
C1, CE
Adjutant

CF:
CC, 93rd Engr Bn

AVBI-OS (16 May 70) 2nd Ind
SUBJECT: Operational Report - Lessons Learned of 93rd Engineer
Battalion (Construction) for Period Ending 30 April 1970,
RCS CSFOR-65 (R2)

DA, HEADQUARTERS, 20TH ENGINEER BRIGADE, APO 9649; 13 JUN 1970

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

1. Submitted in accordance with USARV Regulation 525-15, dated
13 April 1968.

2. This headquarters concurs with the submitted report with
the following comments:

a. Section 2, paragraph a, page 2: Concur: Civilianization
is a good concept when there is a readily available source of
skilled labor. However, these skills are not normally available
in sufficient quantities. In addition, local nationals cannot
work on classified projects or be used as part of the job site
security force.

b. Section 2, paragraph f, page 5: Concur: This is a valid
requirement and has been submitted on a TDA. TOE generators
are not designed for loadings in excess of TOE equipment.

FOR THE COMMANDER:

D L McBride
D. L. MC BRIDE
1LT, CE
Assistant Adjutant

Copies Furnished:
CO, 34th Engr Gp
CO, 93rd Engr Bn

FOR OFFICIAL USE ONLY

PROTECTIVE MARKING IS EXCLUDED
FROM AUTOMATIC TERMINATION
(PARA. 13, AR 340-16)

AVHGC-DST (16 May 70) 3d Ind
SUBJECT: Operational Report of Lessons Learned 93rd Engineer Battalion
(Const) for Period Ending 30 April 1970 RCS CS FOR - 65 (R2)

Headquarters, United States Army Vietnam, APO San Francisco 96375 28 JUN 1970

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

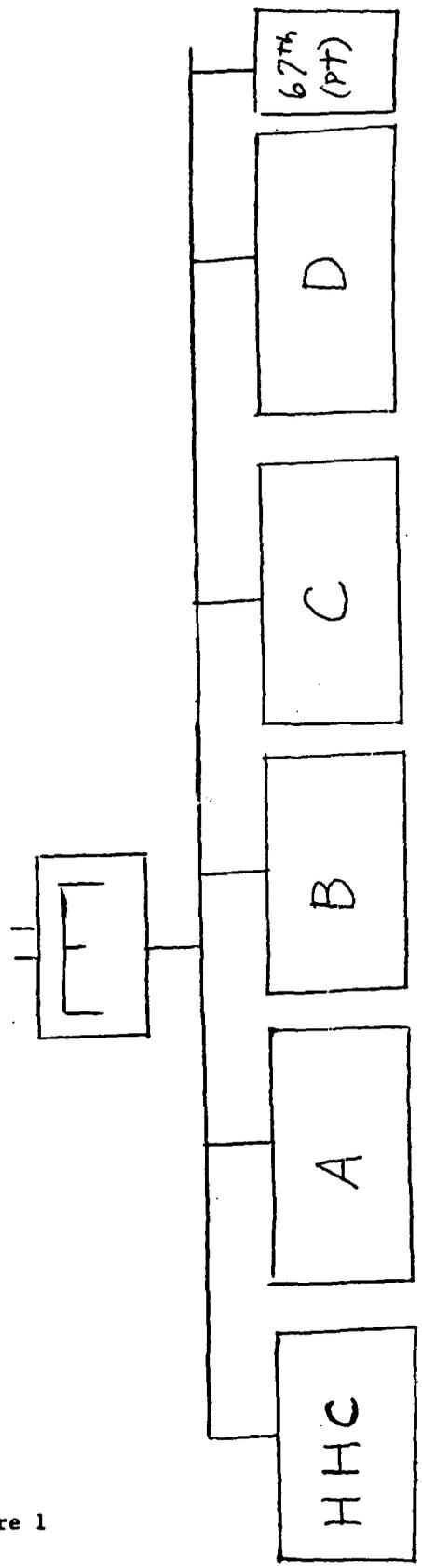
This Headquarters has reviewed the Operational Report-Lessons Learned
for the quarterly period ending 30 April 1970 from Headquarters, 93rd
Engineer Battalion and concurs with comments of indorsing headquarters.

FOR THE COMMANDER:


C. E. NICHOLS
MAJ, AGC
Assistant Adjutant General

Cy furn:
20th Engr Bde
93rd Engr Bn

93RD ENGINEER BATTALION (CONST)



Inclosure 1

FOR OFFICIAL USE ONLY

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author) HQ, OACSFOR, DA, Washington, D.C. 20310		2a. REPORT SECURITY CLASSIFICATION FOR OFFICIAL USE ONLY	
		2b. GROUP PROTECTIVE MARKING MAY BE REMOVED 15 MAY 1973	
3. REPORT TITLE Operational Report - Lessons Learned, HQ, 93d Engineer Battalion			
4. DESCRIPTIVE NOTES (Type of report and inclusive dates) Experiences of unit engaged in counterinsurgency operations, 1 Feb to 30 Apr 70.			
5. AUTHOR(S) (First name, middle initial, last name) CO, 93d Engineer Battalion			
6. REPORT DATE 16 May 1970		7a. TOTAL NO. OF PAGES 13	7b. NO. OF REFS
8a. CONTRACT OR GRANT NO.		9a. ORIGINATOR'S REPORT NUMBER(S) 702067	
b. PROJECT NO. N/A		9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
c.			
d.			
10. DISTRIBUTION STATEMENT			
11. SUPPLEMENTARY NOTES N/A		12. SPONSORING MILITARY ACTIVITY OACSFOR, DA, Washington, D.C. 20310	
13. ABSTRACT			