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AUTHORITY

AGO ltr 29 Apr 1980

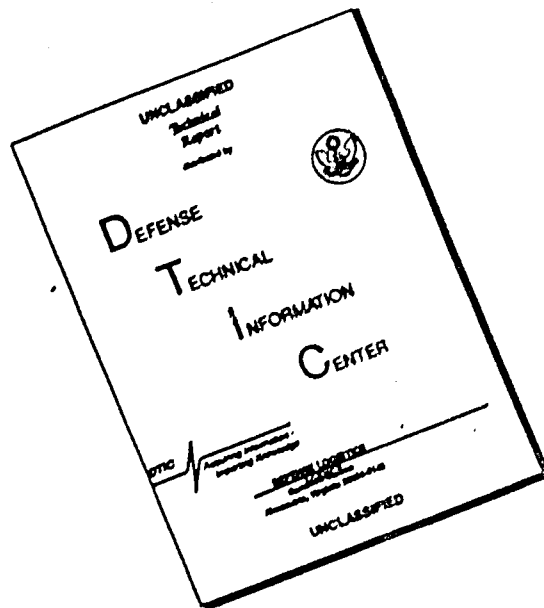
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AD 824623

HEADQUARTERS
87TH ENGINEER BATTALION (CONSTRUCTION)
APO US Forces 96312

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EGACBB-OP

14 March 1966

SUBJECT: Lessons Learned (RCS AVC (OT) 36)

TO: Assistant Chief of Staff for Force Development
Department of the Army
Washington, DC 20310

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1. References:

a. Message 748502 Department of the Army, dated 252232Z January 1966; Subject: Lessons Learned (NOTAL).

b. Letter, Headquarters 35th Engineer Group (Const); Subject: Lessons Learned dated 7 March 1966.

2. The following report for the period 1 October through 31 December 1965 is submitted:

SECTION III: Lessons Learned

Construction Methods

Item: Accepted construction methods.

Discussion: The lessons learned by personnel of this unit can be summarized by stating that sound Engineering and accepted construction method work.

Observation: Ignoring or violating sound Engineering and accepted construction methods results in construction difficulties and/or inadequate results.

Drainage

Item: Adequate drainage.

Discussion: Failure to provide adequate drainage results in delays during construction, excessive repairs, and inadequate facilities - particularly roads and hardstands.

Observation: Adequate drainage is necessary regardless of the length of the dry season or apparent soil conditions.

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OFFICE OF ASST. CHIEF OF STAFF FOR FORCE DEVELOPMENT. ATTN: "FOR-OT-RD" WASH. DC. 20310

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Concrete Batch Plant

Item: Need for concrete batch plant.

Discussion: The experience of this unit with a commercial type concrete batch plant (Blaw-Knox 66 ton) again proved the effectiveness of such equipment. It increases production, provides better quality control, and results in a significant savings in manpower.

Observation: There is a definite need for a concrete batch plant in Engineer construction units.

Concrete Construction Equipment

Item: Inadequacy of TOE equipment for large scale concrete construction.

Discussion: The two (2) 16 cubic feet concrete mixers which each construction Company is presently authorized are inadequate for large scale concrete construction.

Observation: There is a critical need for batch plants, large (34 cu ft or larger) mixers, and steel forms.

Protective Covers

Item: Covers with lightweight frames to protect freshly placed concrete.

Discussion: During the rainy season considerable difficulty was experienced in protecting freshly placed concrete.

Observation: There is a need for covers with a lightweight knockdown type frame for protecting freshly placed concrete during the rainy season.

Two Shift Operation

Item: Two shift operation of dump trucks organic to the construction platoons (Engineer Company, Construction TOE 5-118D).

Discussion: The TOE does not provide sufficient drivers for two shift operation of the 5 ton dump trucks of the construction platoons. As a result, in order to provide a second shift of drivers, the number of personnel available for vertical construction is reduced.

Observation: TOE capability of Engineer construction units should provide sufficient personnel for two shift operation of all authorized dump trucks and earthmoving equipment.

Erection of 10,000 Barrel Bolted Steel Tanks

Item: Erection equipment.

Discussion: Erection tool sets are required. The electric impact wrenches in the sets are not sufficiently heavy duty.

Observation: Planning for erection of 10,000 barrel bolted steel tanks should include providing a minimum of one (1) tool set per construction platoon.

Pipeline Construction

Item: Condition of rubber gaskets.

Discussion: The foil wrapped pre-greased rubber gaskets have proven to be in much better condition than the unwrapped ones, many of which have deteriorated.

Observation: The foil wrapped pre-greased rubber gaskets apparently withstand storage much better than the unwrapped ones. All stocks of gaskets should be checked periodically.

Construction Operations In Sand

Item: Construction operations in sand.

Discussion:

- a. "Slot" or "buddy" dozing results in considerably increased production.
- b. The Caterpillar 830M tractor with 18 cubic yard scraper has proven to be very effective and productive although it normally requires assistance while loading.
- c. Lubrication of all vehicles and equipment should be increased to a minimum of twice the normal frequency.
- d. One of the major construction problems in loose sand is road stabilization. To do this successfully requires stabilizing existing sand sub-base prior to surfacing. Coral has proven to be a better sub-base and base course material under these conditions than crushed granite. Sand-cement stabilization is also effective.
- e. Grusher screenings (often referred to as laterite) from the original quarry opened by units of the 35th Engr Gp (Const) at Cam Ranh Bay are not a suitable material for road stabilization unless treated with asphalt or cement. This material is classified as a sand-silt mixture and becomes very unstable when saturated.

Observation: Construction operations can be conducted in loose sand with TOE equipment, but requires increased maintenance and lubrication. Coral has proven to be an effective material for road stabilization.

Curing of Concrete

Item: Concrete curing under tropical conditions.

Discussion: Due to the extreme heat during the dry season, concrete must be carefully moist cured.

Master Plans

Item: Need to consider future expansion when developing master plans.

Discussion: Failure to consider future expansion as part of the master plan results in wasted effort and facilities which do not fully meet operational requirements.

Observation: Future expansion should be considered and included in master plans.

Standard Drawing

Item: Present TM 5-302 does not provide drawings which are reproducible with TOE equipment.

Discussions: Reproduction of additional copies of standard drawings in TM 5-302 requires hand tracing or drafting.

Observation: There is a definite need for reproducible standard drawings.

Repair Parts

Item: Necessity for an adequate supply of repair parts.

Discussion: The capability of Engineer construction units is so heavily dependent upon the performance of construction equipment and vehicles that an adequate supply of repair parts is essential.

Observation: An adequate supply of repair parts is essential if the capabilities of Engineer construction units are to be realized.

Cement

Item: Loss and damage to cement during shipment and storage.

Discussion: The issue of cement in plastic bags and on pallets reduces losses due to weather and labor and time required for handling.

Observation: Shipping cement in plastic bags and on pallets greatly reduces losses due to weather, speeds handling, and reduces labor requirements.

Drilling Equipment

Item: Inadequacy of TOE rock drilling equipment TOE 5-117D.

Discussion: Present TOE rock drilling equipment is inadequate to meet production requirements.

Observation: Rock drilling equipment with increased capability is needed.

A 75 ton per hour crawler type pneumatic drill is needed in order to utilize crusher capability. All drilling equipment should be supported with an adequate supply of steel and bits.

Observation: Moist curing of concrete is even more critical than normal due to high temperatures.

Commercial Type Vehicles

Item: Civilian contractors and the U. S. Air Force use commercial type vehicles in this theater of operations.

Discussions: Commercial type vehicles require roads of a higher standard than military vehicles.

Observation: The use of commercial type vehicles by contractors and the U. S. Air Force in a theater of operations requires higher standards of roads and more construction effort that would otherwise be required in initial phases of development.

Security

Item: Security in areas of limited combat activity.

Discussion: In areas of limited combat activity a general feeling of complacency is likely to develop.

Observation: Complacency is one of the factors which adversely affects security the most in areas of limited combat activity.

John J. McCulloch

JOHN J. MC CULLOCH
Lt Col, CE
Commanding

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EGA-3 (14 March 1966) 1st Ind
SUBJECT: Lessons Learned (RCS AVC (OT)36)

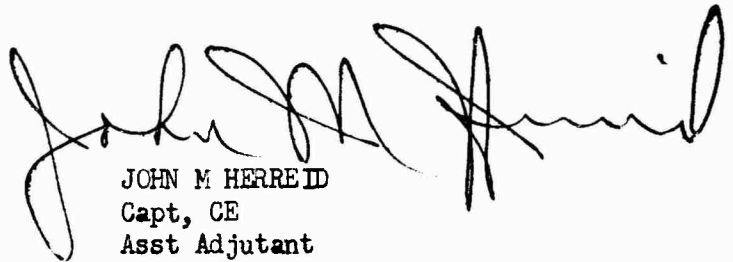
HEADQUARTERS, 35th Engineer Group (Construction), APO U.S. Forces 96312
19 March 1966

TO: Commanding General, 18th Engineer Brigade, APO U.S. Forces 96307

1. In accordance with message 748502 Department of the Army, dated 252232 Z January 1966; Subject: Lessons Learned (NOTAL) the subject report is forwarded for the 87th Engineer Battalion (Construction).

2. Concur in Commander's Observations.

FOR THE COMMANDER:



JOHN M HERREID
Capt, CE
Asst Adjutant

AVEB-3 (14 Mar 66)

2nd Ind

Capt Flora/trs/A-610

SUBJECT: Command Report for Quarterly Period Ending 31 December 1965


HEADQUARTERS, 18th Engineer Brigade, APO US Forces 96307 30 April 1966

TO: Commanding General, United States Army Vietnam, ATTN: AVC, APO US
Forces 96307

1. Forwarded herewith is the original and copy one (1) of the 87th Engineer Battalion (Const) Lessons Learned as required by para 5.a, letter, your headquarters, subject: Lessons Learned (RCS AVC (OT) 36), dated 1 March 1966.

2. Concur in Principle.

FOR THE COMMANDER:


ROBERT R. CONNOLLY
Major, CE
Adjutant

AVC (14 Mar 66)
SUBJECT: Lessons Learned

3d Ind

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO US Forces 96307

7 MAY 1966

THRU: Commander in Chief, United States Army, Pacific, ATTN: GPOP-MH,
APO US Forces 96558

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

1. Reference: Paragraph 2c, DA Message 748502 from ACSFOR, DTG
252232Z, January 1966, Subject: Lessons Learned (NOTAL).

2. Based on the requirements for lessons learned in message, para-
graph 1 above, this headquarters requested a one-time report of lessons
learned, as Section III to the Quarterly Command Reports for the period
ending 31 December 1965, from those units submitting that report. All
preparing units have been directed to include the lessons learned in the
Operational Report on Lessons Learned commencing with the report for the
period ending 30 April 1966.

3. The inclosed report on lessons learned is forwarded for your
information.

FOR THE COMMANDER:



R. J. THORNTON III
1st Lt, AGC
Asst Adjutant General