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AGO D/A ltr, 29 Apr 1980

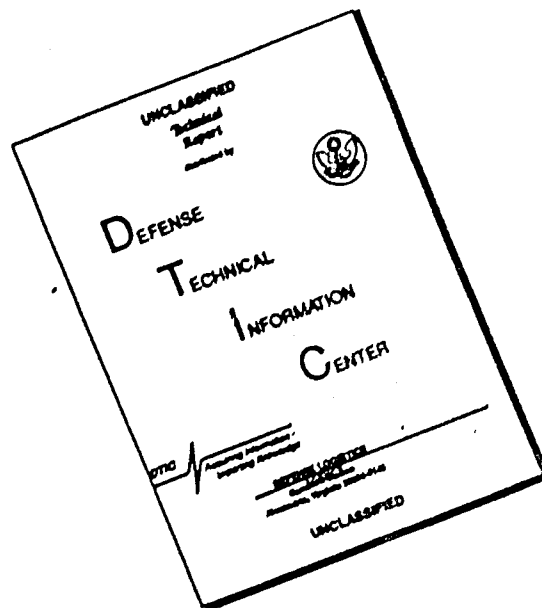
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DEPARTMENT OF THE ARMY  
HEADQUARTERS, 84TH ENGINEER BATTALION (CONSTRUCTION)  
APO SAN FRANCISCO 96349

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EGD-BD-OP

15 November 1971

SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion  
(Construction), Period Ending 31 October 1971, RCS CSFOR - 65 (R3)

THRU: CO, 45th Engineer Group (Construction), ATTN: AVEGD-OP  
CG, USARENGRCOMDV, ATTN: AVCC-MO  
CG, USARV, ATTN: AVHDO-DO  
CG, USARPAC, ATTN: GPOP-DT

TO: HQDA (DAFD-ZA), Washington, D.C. 20310

AD 907853

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2. Lessons Learned: Commander's Observations, Evaluation and Recommendation

a. Personnel:

(1) SUBJECT: Observation on over strength.

(a) OBSERVATION: It is evident that individuals are being assigned from  
standown units without serious consideration as to the proper utilization of  
the individuals concerned.

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*for military operation (Army) Deputy Chief of Staff  
attn: DAMB-DOU Wash's C. 20310*

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EGD-BD-OP

SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion  
(Construction), Period Ending 31 October 1971, RCS CSFOR - 65 (R3)

(b) EVALUATION: The assignment of individuals from standdown units merely for the purpose of requiring them to remain in country without regard to the needs of the gaining unit is not consistent with good personnel management practice. The result is the utilization of the individuals for duties other than what he was trained for, thus making the individual lack the desire to produce. Since most of the young soldiers resent being here, when they are just transferred from one unit to another, job to job, without job satisfaction, they are inclined to become bored and resentful and this only results in additional disciplinary problems.

(c) RECOMMENDATIONS: Consideration of the gaining unit's needs, to include projected losses, should be taken into consideration before the wholesale reassignment of personnel. A prime example is when the 14th Engineer Battalion Standdown, personnel were reassigned to the 39th Engineers and before they could even get settled properly they were transferred to this battalion because the 39th was notified to standdown. Regardless of how long an individual has been in country, consideration of the individual needs and value to the command should be taken into consideration prior to reassignment solely for the purpose of retaining the individual in Vietnam to complete the short tour requirement.

(d) COMMAND ACTION: None.

2. SUBJECT: Transfer of short timers from standdown units:

(a) OBSERVATION: This battalion has received personnel with such insufficient retainability that by the time he processes into his unit, he was getting ready to depart again.

(b) EVALUATION: The in country reassignment of individuals with less than 90 days remaining in country does not benefit the individual or the gaining unit. Personnel assigned with only 20, 30, or less than 60 days until DEROs cannot be properly utilized. To start with, they are bitter for being reassigned with such a short amount of time remaining and they knew that in most cases, since they will be leaving soon, the primary job they will be assigned will be one of trying to keep them busy. Many times those individuals feel what they are doing doesn't even help the mission, this cause them to become lax and only adds to disciplinary problems.

(c) RECOMMENDATIONS: Do not reassign individuals with less than 90 days remaining in country to other units in Vietnam.

(d) COMMAND ACTION: None

SGD-80.0P

SUBJECT: Operational Report - Lessons Learned 84th Engineer Battalion  
(Construction), Period Ending 31 October 1971, RCS CSFOR - 65 (R3)

b. Intelligence; None

c. Operations:

(1) Compaction of Sand Cements

(a) OBSERVATION: Towed compaction equipment was extremely difficult to pull through sand and required a large prime mover which was wider than the compactor and left ridges in the final compacted surface. A smaller prime mover could be utilized if the entire area of compaction and turn around were saturated with water. However, this method normally exceeded the unit's water delivery capability. Little trouble was encountered in the sand cement area once it reached OMC.

(b) EVALUATION: A self propelled roller that can move forwards and backwards eliminating the need for turn around would solve the problem.

(c) RECOMMENDATIONS: Self propelled rollers be made an organic part of all Construction Battalions.

(d) COMMAND ACTION: Recommended change to MTCG was submitted on 1 Jun 1971. To provide immediate relief requests for temporary loan were submitted in May 1971.

(2) Booby Traps at Destroyed Culvert Sites:

(a) OBSERVATIONS: While repairing a blown culvert site on QL1, five men were grouped together near the side of the road complacently conducting conversation. Job site security consisted of gun trucks parked on the road bed. No sweep of the area was conducted and no security placed at 360 degrees around the site. The culvert site was swept for mines using mine dogs and mine detectors. An explosive charge was detonated under the grouped individual resulting in 5 KIA.

(b) EVALUATION: Complacency was the killer. Had the site and surrounding terrain been vigorously swept, alert sentries placed around the work site and individuals on the site kept alert and dispersed, casualties could have been avoided or at least minimized.

(c) RECOMMENDATIONS: Frequent training classes and exercises be run to keep personnel aware of the importance and proper method of approaching enemy destroyed sites. A thorough briefing be conducted prior to moving to the site to insure a well informed and alert repair force.

(d) COMMAND ACTION: Mine and booby trap training has been emphasized in the battalion. Classes are taught at company level on a monthly basis. Booby traps have been made a subject of daily discussion when working on sites susceptible to enemy activity.

EGD-BD-C

SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion  
(Construction), Period Ending 31 October 1971, RGS CSFOR - 65 (R3)

c. Operations: (Cont'd)

(3) Transit Mix Concrete:

(a) OBSERVATION: While pouring concrete at the Keystone Retrograde Facility, it was noted that the consistency of the concrete varied from truck to truck. It was learned that the contractors batch plant was consistent with the mix, but the drivers were adding water to make the concrete more workable for the ground crew.

(b) EVALUATION: The strength of the concrete varied with the slump. Strict supervision and quality control was needed at the batch plant and at pour site. If trucks were checked prior to leaving the plant and again during the pour, the quality of concrete could be controlled readily.

(c) RECOMMENDATIONS: A quality control representative be stationed at the batch plant to check the mix and slump of each batch. Another quality control representative at the pour site to check slump on every load during the pour.

(d) COMMAND ACTION: This procedure has been made a part of this battalion's Quality Control SOP.

(4) Compaction:

(a) OBSERVATION: While excavating for form work on the Keystone Retrograde Facility, Hydraulic fill was encountered which could not be compacted. The material remained spongy regardless of the compactive effort applied.

(b) EVALUATION: The hydraulic fill had to be removed, at least to a depth to allow a bridging action when rock was added to the excavated area.

(c) RECOMMENDATIONS: The bad material be excavated to a depth of 7 feet and 6-10 inch surge rock be placed in an attempt to bridge over the spongy base. Six feet of surge rock was adequate to bridge the area and another 12 inches of select fill provided a perfect blend with the surrounding fill. Forms were constructed and concrete poured. Class 60 loads have been carried over the area with no apparent subgrade failure.

(d) COMMAND ACTION: None.

(5) Transporting Pipe to Inaccessible Areas

(a) OBSERVATION: We were required to lay 1500 feet of 6" PCL line at Spanish Beach to support the Keystone Retrograde Facility. This area was not accessible to vehicle traffic and only light boats could approach it because of a reef. This problem of delivering pipe to the site had to be solved immediately.

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SUBJECT: Operational Report - Losses sustained, 84th Engineer Battalion  
(Construction), Period Ending 31 October 1971, MCS CUPDR - 65 (R3)

c. Operations (Cont'd)

(b) EVALUATION: Helicopter delivery would be possible, but many trips would be necessary hauling bulky loads. If the pipe was capped at both ends it may be possible to float them to the site.

(c) RECOMMENDATIONS: The 6 inch pipe be capped and transported to the vicinity of the site by barge. Pipe would be floated a shore during high tide. Over 1500 feet of pipe was transported in this manner with no loss.

(d) COMMAND ACTION: None

(6) Expedient Septic Tank:

(a) OBSERVATION: A 450 gallon/day septic tank was needed at the TE-1 MACV Facility. Forming material was critical to other areas of the project and in short supply. A method other than concrete had to be devised.

(b) EVALUATION: Corrugated metal pipe could very possibly be used for the tank and baffles.

(c) RECOMMENDATIONS: A 48" corrugated metal pipe be utilized as the tank and 18" corrugated metal pipe be used as the baffles. A concrete floor and top be constructed. System has functioned perfectly since installation.

(d) COMMAND ACTION: None

(7) Ring Footers

(a) OBSERVATION: The mess hall at the TE-1 MACV Facility needed plumbing installed under the concrete floor. Plumbing material was not available but all other construction material was on hand.

(b) EVALUATION: The floor slab could not be poured because of the non-availability of plumbing material, but it was extremely important to commence construction in order to meet existing schedules.

(c) RECOMMENDATIONS: Pour a ring footer to permit construction to continue. The building be erected on the footer and when plumbing material became available they would be installed. The concrete floor be poured after erection of building frame and installation of plumbing.

(d) COMMAND ACTION: None

(8) Fabrication of Spreader Bars:

(a) OBSERVATION: Dump trucks to haul rock for the Double Aluminous Surface Treatment on Route ML-130 were critical. Very few dump trucks in the battalion were equipped with spreader bars.

**EGD-ED-C**

**SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion (Construction), Period Ending 31 October 1971, RCS CSFOR - 65 (R3)**

**c. Operations (Cont'd)**

(b) **EVALUATION:** In order to spread the rock evenly a spreader had to be used. More spreader bars had to be made available immediately.

(c) **RECOMMENDATION:** Manufacturing an appropriate tool by welding a  $\frac{1}{2}$ " sheet of steel, cut to pattern, on the back of the 5 ton truck. Two pieces of 2" angle iron, 21" long and 9 $\frac{1}{2}$ " apart be attached to the end of the steel. A 1" bar, 26" long be placed horizontally and welded to the bottom of the angle iron to connect to the spreader box.

(d) **COMMAND ACTION:** None

**(9) Communications Tower**

(a) **OBSERVATION:** A 55 foot communications tower was needed at Camp Hoa Long to improve the existing communication facility.

(b) **EVALUATION:** Construction with 60 foot timber poles was suggested, but timber poles of that length were not available. Also the location of the tower was so confined that manipulating the poles would be difficult, if not impossible. Old 40 ton crane booms were available at the POC yard.

(c) **RECOMMENDATION:** A 6' x 6' x 8' footer be excavated. The first 15' section of boom be placed in the hole and rebar be formed in and around the section. Concrete be poured embedding the tower section in reinforced concrete. From this base, 15 foot sections be added until the desired height is reached.

(d) **COMMAND ACTION:** None

**(10) Road Reconnaissance under Flood Conditions**

(a) **OBSERVATION:** While inspecting Highway Q-1 after typhoon Hester, it was found that the majority of the road was under water.

(b) **EVALUATION:** A complete road reconnaissance had to be conducted to determine the trafficability of the road. Supply convoys were critical to stranded units.

(c) **RECOMMENDATIONS:** A foot reconnaissance be conducted using a 5 ton dump truck to follow the ground mounted recon team. All members of the recon team be equipped with inflated life jackets and required to hold onto an anchor line attached to the 5 ton dump truck.

(d) **COMMAND ACTION:** None

**d. Organization: None**

**e. Training: None**

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SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion (Construction), Period Ending October 1971, EGS CSFCR - 65 (R3)

f. Logistics

(1) Procurement of Construction Materials:

(a) OBSERVATION: Many projects are very "short-fused" requiring immediate response. Construction materials are normally the hold up during the initial phases of the project.

(b) EVALUATION: Procurement of materials requires a certain amount of paper work in the form of bills of materials and requisitions. However, this required administrative work could be completed and processed very quickly. The locations of materials, delivery of materials and continuous follow-up were the factors causing delay.

(c) RECOMMENDATIONS: An officer be assigned to the S4 Section with the primary duty of material readiness expeditor. Procurement of construction materials being his primary function.

(d) COMMAND ACTION: This situation is peculiar only to this combat zone, therefore, the need for an MRE would have to be determined by the existing situation.

g. Communications:

(1) Shortage of Communication Equipment:

(a) OBSERVATION: The 84th Engineer Battalion (Construction) has been assigned combat engineer projects as well as construction projects. This has made it necessary to operate with squad size units, widely dispersed throughout built up areas and on occasion, being isolated on remote fire support bases. Control has been a constant problem because of the lack of sufficient radios.

(b) EVALUATION: Construction battalions involved in tactical operations should have the same squad level communications capability as the Combat Engineer Battalions.

(c) RECOMMENDATIONS: The NTR for Construction Battalions be changed to authorize squad level communications.

(d) COMMAND ACTION: A recommended change to the NTR is now being drafted.

h. Materials None

i. Other None

*David L. Lyan*  
DAVID L. LYAN  
LTJ, CG  
Commanding

WFOG-2 (30 Nov 71) 1st Ind  
SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion  
(Construction), APO 96349

REPORTING OFFICER, 45TH ENGINEER GROUP (CONSTRUCTION), APO 96317

THRU: Commanding General, USARPACOMDV, ATTN: AVCC-MO, APO 96491

TO: Headquarters, Department of the Army (DAFD-ZA), Washington DC, 20310

1. The significant activities and lessons learned have been reviewed and are adequate reflection of the units operations during this period.
2. Reference item concerning, "Observation on over strength," page 30, para 4. Concur. Recommend that either units be allowed to curtail over strength personnel or allow influx of personnel to over strength units to allow 100% balance to be achieved. At this time, some units are at 120% 100% strength in personnel.
3. Reference item concerning, "Transfer of short timers from standdown units," page 31, para 2. Concur. Recommended that actions be initiated to prevent short timer transfers.
4. Reference item concerning, "Compaction of sand cement," page 32, para 1. Concur. Approval of 100% change recommended.
5. Reference item concerning, "Booby traps at destroyed culvert sites," page 32, para (c). Concur. No actions by USARPAC or DA is recommended.
6. Reference item concerning, "Transit mix concrete," page 33, para 3. Concur. No actions by USARPAC or DA is recommended.
7. Reference item concerning, "Compaction," page 33, para 4. Concur. No actions by USARPAC or DA is recommended.
8. Reference item concerning, "Transporting pipe to inaccessible areas," page 33, para 5. Concur. No actions by USARPAC or DA is recommended.
9. Reference item concerning, "Fixed/septic tanks," page 34, para 6. Concur. No actions by USARPAC or DA is recommended.
10. Reference item concerning, "King footers," page 34, para 7. Concur. No actions by USARPAC or DA is recommended.
11. Reference item concerning, "Fabrication of spreader bars," page 34, para 8. Concur. No actions by USARPAC or DA is recommended.
12. Reference item concerning, "Communication towers," page 35, para 9. Concur. No actions by USARPAC or DA is recommended.

WDD-2 (30 Nov 71) 1st Ind

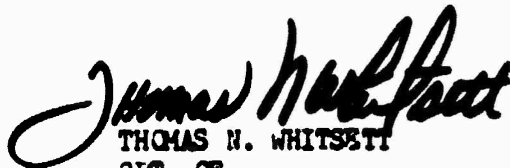
SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion,  
(Construction), APO 96349, (Cont)

13. Reference item concerning, " Road reconaissance under flood conditions,"  
page 35, para 10. Concur. No actions by USARPAC or DA is recommended.

14. Reference item concerning, " Procurement of construction materials,"  
page 36, para f. Concur. Recommend the MTOE for combat and construction  
battalions be augmented to include a line for material readiness exeditor.

15. Reference item concerning, " Shortage of communication equipment," page 36  
para 9. Concur. Change to MTOE is being drafted to be submitted through  
normal channels. Recommend approval of MTOE change upon receipt.

FOR THE COMMANDER



THOMAS N. WHITSETT  
CPT, CE  
Assistant Adjutant

AVCC-MO (15 Nov 71) 2nd Ind  
SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion  
(Construction), Period Ending 31 October 1971, RCS CSFOR-65 (R3)

Hq, U.S. Army Engineer Command Vietnam, APO San Francisco 96491 g... ..

TO: Commanding General, U.S. Army Vietnam, ATTN: AVHDO-DO, APO San  
Francisco 96375

1. The significant activities and lessons learned have been reviewed and are an adequate reflection of the unit's operation during this period.
2. Reference item concerning "Observation on Over Strength", page 30, paragraph 2a(1). Concur. Personnel should be reassigned to minimize turbulence, but the incremental nature of drawdown planning and execution occasionally results in multiple reassignments. No action by USARPAC or DA is recommended.
3. Reference item concerning "Transfer of Short Timers from Stand-down Units", page 31, paragraph 2a(2). Concur with the statement that personnel with less than 90 days remaining in their FST should not be reassigned to other units in Vietnam. No action by USARPAC or DA is recommended.
4. Reference item concerning "Compaction of Sand Cement", page 32, para 2c(2). Nonconcur. Coordination with 84th Engr Bn by AVCC-MO-P indicates that the motorized roller referred to is a self-propelled steel-wheeled roller which is authorized by MTOE 5-117G and 5-118G. No action by USARPAC or DA is recommended.
5. Reference item concerning "Transit Mix Concrete", page 33, paragraph 2c(3). Nonconcur. One supervisor at the pour site should be able to control the addition of water and the mixing of the concrete. No action by USARPAC or DA is recommended.
6. Reference item concerning "Compaction", page 33, paragraph 2c(4). Concur. This is a satisfactory method for eliminating bad material from a soil structure. The bad material in the hydraulic fill was probably a "mud pocket". This pocket occurs when a pool is allowed to form as an area is being filled. Excessive fines then settle out of the dredge effluent producing a "mud pocket". No action by USARPAC or DA is recommended.
7. Reference item concerning "Transporting Pipe to Inaccessible Area", page 33, paragraph 2c(5). Concur. This type of operation should only be conducted in good weather with rigid safety precautions enforced, especially during the retrieval of the 6 inch pipe. This method of transporting pipe should be one of the last plans considered due to the safety hazards and the possible loss of pipe when floating it to shore on the high tide. No action by USARPAC or DA is recommended.

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AVCC-MO (15 Nov 71) 2nd Ind

SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion  
(Construction), Period Ending 31 October 1971, RCS CSFOR-65 (R3)

8. Reference item concerning "Procurement of Construction Material", page 14, paragraph 2f(1). Nonconcur, the Construction Engineer Battalion is designed to function in a Combat Environment any where in the world. The battalion S-4 officer supplemented with a battalion S-4 NCO is capable of maintaining the proper priority for expediting construction materials. If a battalion location makes it entirely infeasible for the battalion S-4 to handle this function a battalion could be tailored with a specific MTOE. No action by USARPAC or DA is recommended.

9. Reference item concerning "Shortages of Communication Equipment", page 14, paragraph 2g(1). Concur. The recommendation for change to the MTOE will be forwarded by this headquarters for consideration and possible approval.

FOR THE COMMANDER:

*J. Louis E. Saffley* 145  
D.Y. FREED  
CPT, AGC  
Assistant Adjutant General

CP:  
84th Engineer Battalion  
45th Engineer Group

19 FEB 1972

AVHDO-DO (15 Nov 71) 3rd Ind  
SUBJECT: Operational Report - Lessons Learned, 84th Engineer Battalion  
(Construction), Period Ending 31 October 1971, RCS CSFOR-65 (R3)

Headquarters, United States Army Vietnam, APO San Francisco 96375

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

This headquarters has reviewed the Operational Report - Lessons Learned for the period ending 31 October 1971 from Headquarters, 84th Engineer Battalion and considers it an adequate reflection of the unit's activities during the period.

FOR THE COMMANDER:



T. L. CHILDRESS  
CPT ACC  
ASSISTANT ADJUTANT GENERAL

Cy furn:  
USARENGRCOND-V  
84th Engr Bn

GPOP-FD (15 Nov 71) 4th Ind  
SUBJECT: Operational Report-Lessons Learned, HQ 84th  
Engineer Battalion (Const), Period Ending  
31 October 1971, RCS CSFOR-65 (R3)

HQ US Army, Pacific, APO San Francisco 96558 10 MAR 1972

TO: HQDA (DAFD-ZA) WASH DC 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

*M. L. Mah*

M. L. MAH  
1LT, AGC  
Asst AG