UNCLASSIFIED

AD NUMBER

AD848942

LIMITATION CHANGES

TO:

Approved for public release; distribution is unlimited.

FROM:

Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; 23 FEB 1969.

Administrative/Operational Use; 23 FEB 1969. Other requests shall be referred to Office of the Adjutant General, Washington, DC 20310.

AUTHORITY

AGO ltr 29 Apr 1980

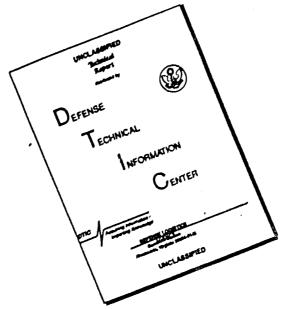
THIS PAGE IS UNCLASSIFIED

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.

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.



FOR OFFICIAL USE ONLY

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

IN REPLY REFER TO

AGAM-P (M) (18 Feb 69) FOR OT UT 684228

25 February 1969

SUBJECT: Operational Report - Lessons Learnad, Headquarters, 93d Engineer Battalion (Const), Period Ending 31 October 1968

SEE DISTRIBUTION

1 Incl

1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT UT, Operational Reports Branch, within 90 days of receipt of covering letter.

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:

finneth G. Nackham

KENNETH G. WICKHAM Major General, USA The Adjutant General

DISTRIBUTION: Commanding Generals US Continental Army Command US Army Combat Developments Command Commandants US Army War College US Army War College US Army Engineer School US Army Infantry School US Army Transportation School

Copies furnished: Office, Chief of Staff, US Army Deputy Chiefs of Staff Chief of Engineers Chief of Research and Development

UNCLASSIFIED REPORT DISTRIBUTION NO FOREIGN WITHOUT APPROVAL OF ABBISTANT CHIEF OF STAFF FOR FORCE DEVELOPMENT (ARMY) ATTN FOR OT (17. WASHINGTON, D.C. 20318

Protective marking cancelled when separated from inclosure.

FOR OFFICIAL USE ONLY



17

AD848942

FOR OFFICIAL USE ONLY

DEFARTMENT OF THE ARMY Headquarters; 93d Engineer Battalion (Const) AFO San Francisco 96370

ECFR-OP

15 November 1968

SUBJECT: Operational Report of 93rd Engineer Battalion for Period Ending 31 October 1968, RCS CS FOR - 65 (RI)

CINCUSAFAC, ATTN: CPOP-DT, APO San Francisco 96558 Commending General, USARV, ATTN: AVHCC-DST, AFO San Francisco 96375 Commending Officer:, 20th Engineer Brigade, ATTN: AVHI-CB, AFO San Francisco 96491 Commending Officer, 34th Engineer Group, ATTN: EGF-OP, AFO San Francisco 96291

1. Section 1. Operations: Significant Activities?

The Battalion remained at Dong Tam Pase, RVN (XS 1711) throughout the report period, with the exception of the first Dump Truck Platoon of the attached 67th Engineer Company (Dump Truck) which remained in support of and collocated with the 36th Engineer Battalion (Construction) at Vung Tau. Battalion organization was as shown at Inclosure 1.

The Battalion continued and increased the level of its effort in support of the 9th Infantry Division in development of the Division's principal operating base of Dong Tam. The 9th Division essentially closed in the Delta, primarily at Dong Tam, during the period. Aviation protective, operating, and maintenance facilities; maintenance and covered storage: and utility systems received most of the battalion's construction effort (construction projects completed during the period are cited at inclosure 2 and work in progress at the close of the period is given at inclosure 3).

In August, the 9th Infantry Division, under command of MG Julian J Twell, made an urgent request for sufficient engineer effort to remit completion of the priority essential construction necessary for the most basic support of sustained operations by the end of December 1969, with a majority of the effort to be completed by 1 December. In earlier request in June 1968 resulted in the stationing of two F6th Engineer Pattalion (Combat, Army) companies on Dong Tam Base for the nurpose of vertical construction during the rainy season. These companies (Pand D) came off the rehabilitation of route OLA between My Tho and My Thuan on completion of that effort. The companies remained under full control of their own Battalion but took over several projects assigned to the 93d Engineer Battalion. The 93d continued to requisition the suprlies to be used on these projects but issued the meterial to the 86th. Site and building red proparation for the structures to be built by the 86th was merformed by the 93d as earth moving capability of the 86th was fully employed in combat and operational suprort projects in Long in Province and in the construction of the Binh Duc 0-123 capable sirfield.

To further support preparation of a full support facility at Nong Ter for the wth Division, the 34th Engineer Group (Construction) relocated a specially teilored construction commany of the 36th Engineer Pattalion (Construction) from Vung Tau to Dong Tem and plaged it under the operational control of the 93d. The company consisted of the headquarters and the two Inclosure

FOR OTUT 684228

FOR OFFICIAL USE ONLY Disregard Special Instructions

YOK UFFICIAL USE ONLY

EGFB-OP SUBJECT:

15 November 1964 Operational Report of 93d Engineer Pattalion for Period Ending 31 October 1964, RCS CS FOR - 65 (RI)

construction platoons of B Company and an additional construction platoon of D Company. It was sent to Dong Tam for the construction of three specific projects: $6 - 40^{\circ} \ge 96^{\circ}$ pre-engineered maintenance buildings for the 709th Maintenance Bettalion, $6 - 40^{\circ} \ge 96^{\circ}$ pre-engineered storage buildings for the 9th Supply and Transport Bettalion, and $2 - 80^{\circ} \ge 144^{\circ}$ helicopter maintenance hangers for the 9th Aviation Bettalion. This construction was scheduled for a 1 December completion. The 93d provided site preparation, building reds, and ordered and issued supplies for the construction by this company.

Further support for both troop and "self-help" construction was provided for the development of the base by the attachment of the 113th Engineer Detechment (Concrete Mixing and Paving) to the Pattalion on 10 September. The 113th was detached from the 79th Engineer Group (Construction) and attached to the 34th Group for use at Dong Tam due to the continuing large concrete requirements at Dong Tam. Prior to initiation of operations of the 4 cubic yard hatch plant on 16 September, the 93d had onerated two separate concrete mixing plants of 4 and 5 each 16S mixers. The operations of these two plants required up to 100 men per day, provided by the operating units, B and C companies, and the units requiring concrete. Each unit, engineer or self-help, was required to provide 8 men and a supervisor to batch the dry materials for each 16S mixer to be used. Each mixer was able to produce a dump truck load of 32 to 4 cubic yards of wat concrete in approximately 45 minutes. The new 4 cubic yard batch plant required approximately 15 men for its operation and units requesting concrete provided a total of shout 6 men to assist in debagging cement into the silo the night before the unit was to receive the concrete. Dump truck loads of 3 cubic yards were produced consistently on a cycle time of 4 to 5 minutes with the plant. A consistently higher output was provided by the plant over that of 165 operations, with a saving of 60 or more men per day. The 93d continued to haul the concrete in its dumm trucks in support of both engineer troop and self-help construction. The 113th was initially attached to B Company since that company had previously operated the principal 165 plant. The new batch plant was sited at the location of the old batch plant. On alcot to relocate B company from Dong Tam, still pending on 31 October, the 113th was detached and attached to A company. This attachment proved to be a more workable and practical arrangement. The responsiveness of maintenance and repair provided by the direct suprort capability in A commany is essential for the continued operation of the complex betch plant with its unions equipment and ments requirements. The plant was operated without any downtimes for repair lasting over 24 hours and produced 5,500 cubic yards of concrete during the period 16 September to 31 October.

The 702d Engineer Detechment (Power Line) remained attached through the period. It was further attached to C company which had responsibility for constructing the power distribution system. The 12 man, 1 officer detechment became increasingly skilled but was too small in itself to accomplish the construction at a rate compatible with the construction of the power plant. The bettalion was able to obtain additional equipment

FOR OFFICIAL USE ONLY

tor Ufficial USE ONLY

EGFB-OP

15 November 1968 SUBJECT: Operational Report of 93d Engineer Battalion for Period Ending 31 October 1968; RCS CS FOR - 65 (RI)

in September which allowed metor expansion of the operation. The principal additional equipment were coffing hoists and a signal line truck. In place of a pole setting crew and one to two teams working on the role climbing tasks, the task was organized into a role setting crew with crane, earth auger, and low bed semi-trailer; a framing crew: a transformer setting crew; a primary wire crew; a secondary wire crew; and a service drop crew. Approximately 45 men were involved in the sugmented operation. With the exception of pole setting, essigned to A company, the task remained C company's responsibility with the 702d Detechment providing the control and trained mucleus. The additional rersonnel assigned received their pole climbing and electrical training on the tob.

Flexibility in assignment of tasks for construction was partially limited by the number of large manhour projects. Projects such as hangars, nower plant and electrical distribution system, water plant and water distribution system, and heliport were platoon or larger projects, each with a duration of over three months. At the start of the period, each construction company had at least two platoons committed on such projects: B Commany had all 3 platoons on the helirort and revetments; C Commany had two platoons on the power plant and the 702d on the distribution system: and D Company had one construction rlatoon on two hangars and the other about to be fully committed to the water plant, system, and storppe towers. The 9th Division, as the sole costomer, provided a priority listing of projects which covered effort available between July and December which alleviated the lack of flexibility in the Pattalion employment. The 36th Grour used the 86th Engineer Battelion (Combat, Army) and the 9th Division used the 15th Engineer Battalion (Combat, Divisional) for emergency and other, off-Dong Tam requirements. This permitted full concentration on the longer range efforts which resulted in a high level of effectiveness.

On completion of the heliport and revetments in late August, B Comment was available for a succession of priority, small scale efforts. The change from the heliport to vertical construction also brought a major lift to the unit 'B morale which had reflected the engagement, for at least part of the company, on the heliport since February. The company auickly completed 11,520 source feet of maintenance buildings for F Co, 709th Maintenance Battalion; a 3,840 source foot Divisional Medical Sumply Warchouse; a 3,800 source foot electronic maintenance facility for Hos / Co, 709th; 4,836 sausre feet of dry kennels for the 45th Scout Dog Flatoon: and 4,000 source fect of operations buildings for the 214th Aviation Batialion.

Earthmoving capability was committed on a variety of projects, which were essential but did not provide ready visibility of the effort expended Dump trucks were princially used in materials haul, particurarly the movement of rock from herge site to stockwiles on Dong Tem, from numry to loading nier in Vung Tau, C Company's rehabilitation and ungreding of Routes TL 22 and TL 25 adjacent to Dang Take and in support of the 15th and 86th Engineers. Continuel dump uck support was provided the 96th for movement of send from Dong Tem to My Who and movement of Laterite from Long

FOR OFFICIAL USE ONLY

TOR Official USE ONLY

EGFB-OP SIBJECT :

State States

15 November 1968 Oberational Genort of 93d Engineer Battalion for Feriod Ending 31 October 1968; RCS CS FOR - 65 (RI)

Thanh North borrow pits to Long An province projects. Concrete haul was another major daily requirement for dumn trucks.

The heavier earth friding and moving equipment was continuously employed in road upgrade on Dong Tam and routes TL 22 and TL 25 (until taken over by the 86th Engineer Battalion), site and pad preparation for all buildings under construction at Dong Tam other than by contract, entrenching for the water distribution system, sand haul for concrete batch plants and for filling revetments and bunkers, construction of a protective berm around Dong Tem (in support of a 15th Engineer Battalion (Divisional) Operational support effort), and in sand-cement stabilization. Earth moving platoon personnel were also engaged in replacement of bridges by culverts and pouring mess hall slabs (C Company), placing 7-17 membrane overlain by MSA1 matting for helicopter refueling pads (B Company), and laying water pipeline (D Company). Following heavy rains in September and early October, the battalion initiated major sand-cement stabilization projects with the construction of the CH 47/CH 54 staging area, a 100' x 4000' helicopter active runway, and stabilized hardstands for helicopter maintenance hangars.

Battalion operations were not disrupted by energy activities during the period. The Battalion expended 45,363 MH on base camp security, 23,677 MH on job site security, and 11,020 MH on improving the security of its sector of the Dong Tam base perimeter. The principal form of enemy activity continued to be infrequent morter and rocket attacks on Dong Tem. The battalion suffered 5 wounded, all from one morter round on Dong Tam, and minor damage to property in unit areas or on construction projects. The most significant damage occured during a mortar attack on 76 August when the power plant site received arrorimately 20 rounds, prior to completion of the revetments. Four of the 500KW generators had minor damage from shrapnel and one of these generators suffered a direct hit on its main frame. Approximately 15 rounds struck the site on 21 October, after revetment construction, with negligible damage to the nower generation equipment. The 67th Engineer Company's Dump Truck platoon in Vunp Tau had considerable damage to stored vehicular parts as a result of a rocket attack on 19 October.

The battalion was elected in October to be prepared to send a tailored company to Noc Hoe in support of the Dry Sesson Campaign. B Company was designated to go as it was completing its current projects. The initial lift was to be the headquarters and earth moving platoons and one construction platoon. The 113th was detached and attached to A Company and "he prepared" orders were issued for the attachment of the other construction platoon and that carthmoving equipment not poing on the first lift to C Company.

Continuing tasks were assigned among the various commanies. A Company continued to be responsible for operation of the rock off-loading facility and direct support maintenance for the Battalion and its attached units. On 1 October the change from E-Series to G-Series TCE and the approved US/RF/C MTCE 2/68, 9 'upust 1968 added wheeled webicle 3d echelon responsibility to its engineer equipment responsibility. The battalion continued

FOR OFFICIAL USE ONLY

FOR OFFICIAL USE ONLY

EGFB-OP

15 November 1968 SUBJECT: Operational Report of 93d Engineer Battalion for Period Ending 31 October 1968, RCS CS FOR - 65 (RI)

to support self-help construction of billets and meas halls on Dong Tem through the issuing of meterials, site and pad preparation, and technical advice and assistance. The bettalion provided additional services at Dong Tem by operation of the power distribution system on completion of segments and prior to take over by the Installation Engineer. The water system and plant was put in operation as soon as sections were completed and able to accept, or produce, water. Beneficial occupancy or use of pertially completed structures was normal as construction was concurrent to the closure of the service units at Dong Tem.

A few construction directives for MCA funded construction essentially covered the full score of the entire Dong Trm base development. These were further concentrated by publication of a single consolidating directive (scope at inclosure 4) which provided the authority and basis for extensive construction effort. The 9th Infantry Division Base Development office for Dong Tem prepared the requests for the construction, prepared the Division's priority for their accomplishment, and sited the structures on the overall base development map. A very close lisison between the 93d and the Base Development office and the associated Division Staff officers permitted good advanced planning, minimal need for rescheduling, and a high level of responsiveness to customer requirements.

The bettelion continued to provide the construction material logistic support for a level of effort far above that of its own units. The Battalion supplied half of 34th Engineer Group's vertical construction capebility (9 of 18 construction platoons and 6 of 12 combat platoons) used most of the cement delivered to the Delte, and was the largest user of crushed rock in the Delte, Principal material transportation was by berge from Vung Tau, surplemented by 93d and contract truck convoys from depote: in the Long Binh and Vung Tau arcas. The hattelion required approximately 570,000 hoard fact of assorted lumber sizes, 6,000 cubic yards of rock, 92,000 bags of cement, and 600 bayrels of asphaltic products to meet average monthly requirements.

Battalion headquarters remained at Dong Tam and there were fewer key position changes than during the previous three month pariot. Principal changes were: MAJ Rohert C Trippel, CE, 05700118 to Bn XO, vice MAJ RobertA Winslow, CE, 05507248 who remeined Bn 3-3; CPT William & Miller, CE, OF1/2562 to Bn S-4, vice CPT. Kreig U. Hensen; CE, 095953: MJT Derrell J. Dayor, BC, 05349500 to Pn Comm 0, vice (IE Roper F. Romers, CF, 05052306 who remained CO, HHO; 1LT Eurene H. Heinle, CF, 05213559 to CO, D Co, vice CFT Herry H. Mellon, CE, 05241865.

Bettalion edministration was fecilitated by being essentially concentrated et Dong Tem following e six month transition when the bettalion was split between Long Thanh North, in Bien Hos Province and Dong Tam. Resic reracemel and administrative statistics are given at inclosure 5.

For Official USE andy

TOR UTFICIAL USE ONLY

IGFB-OP

15 November 1968 SUBJECT : Operational Report of 'Bd Engineer Battalion for Period Ending 31 October 1968; RCS CS FOR - 65 (RI)

2. Saction 2. Lessons Legrned: Commender's Observations, Evaluations, and Recommendations

a. Personnel

(1) Rotational Humps

(a) OBSERVATION. Due to humps in assignment of rersonnel into the unit excess rotations by month occur.

(b) EVALUATION. The personnel inhelance creates a chain of unfavorable actions. To minimize the rotational humps impact, infusion programs between like units must be initiated. These reassignments cause experienced personnel to be pulled abruptly off a job for which they heved planned and worked. It generates a morale problem and lessens unit identity and pride. The RVN tour is of minimum length (12 months); to reassign personnel due to rotational humps highlights aismanagement in the personnel field, shortens the effective length of the tour and lessens the effectiveness of infused experienced personnel.

(c) RECOMMENDATION. Integrated computerized personnel assignments be immediately established for Vietnam with rotational dates as a criterion in a unit assignment. Although this concept may be programmed for DA use, it appears that Vietnem should receive grass root benefits at the earliest possible time.

b. Operations.

(1) Send Cement Stabilization Frocedure

(a) OBSERVATION. Send cement stabilisation provides an excellent bese course for herdstands, road and airfield facilities but is a slow, time consuming procedure.

(b) EVALUATION. A good proportion of time is required in the debegring process. If cement were aveilable in hulk, over 50 per cent of the menhours in the sand cement stabilization process would be saved. In Lieu of bulk coment a debegging and laydown process was developed by the 93d Engineer Battalion to optimize envipment usage while minimizing the menual task time. Inclosure 6 depicts the doharping mocess. Falletized cement bags are dropped off the rellets onto the hucket of a front lorder. The bucket has been fitted with one of the metal cement pallets. Դո the pallet a pointed knife has been mounted which breaks oven the baga upon inpect. The bucket holds the contents of sparocimetely forty 110 pound cement heps. The front loader than empties its load into a 200M screper as shown at Inclosure 7. This procedure is repeated until the screpor is filled with cement. Alternating crews and using multiple front end loaders and screpers proportionate'v increases production. An additional henefit is reaped since the debris of used cement base and

FOR OFFICIA / USE DAKY

FOR OFFICIAL USEDNLY

EGFB-OP

15 November 1968 SUBJECT: Operational Report of 93d Engineer Battalion for Period Ending 31 October 1968; RCS CS - 65 (RI)

pallets is centralized at the cement stockpile instead of having these items strewn all along and through the worksite. This latter condition occurs when debagging is done along the area to be stabilized. Inclodure 8 illestrates the cement laydown procedure with the 290M tractor and screper. In this case a 1 to 10 ratic of cement to sand was used which **requires** approximately $1\frac{1}{2}$ to 2^{\parallel} of loose cenent to be layed by the scraper operator. If a less skilled operator provides an uneven laydown lift a grader can redistribute cement for an even lift. From this point the normal disk harrow, moisture application and compaction process continues.

(c) RECOMMENDATION. That bulk shipments of conout be used in Vietnam, particularly where central concrete batch plants are operated and where quantity sand cement stabilization is needed. That the debagging and lift laydown procedure for sand cement be utilized as indicated above and in the inclosures, wherever applicable.

(2) Grass Seed and Peneprime for Soil Control

(a) OBSERVATION. Considerable difficulty has been experienced with stabilization of hydraulically grodged sand. It has been particularly difficult due to erosion under the heavy rains of Vistnam and the blowing of sand caused by rotor wash of aircraft. Two solutions have been used by the 93d Engineer Battalion. One approach was with grass seed and another with a dust palliative; Peneprime.

(b) EVALUATION. Using grass seed proved helpful, however the light bermuda grass seed specified as best for the area by a consultant agronomist tended to blow away with the sand under rotor wash of aircraft and washed rapidly during heavy rains. Peneprimo worked well except it tends to "pick up"when trafficed on and needs constant reapplications of Peneprime to cover now sand and earth which blows over it. It provided little capability to prevent erosion once the seal is broken and water can get under it. Using the two solutions concurrently gave best results. When Peneprime was applied over new grasses it cut the new grass off from the sunlight it required for growth. From the experience of the 93rd Engineer Battalion the best sequence is to drive the seed into the ground by machine (a hydroseeder) or rake it in by a large rake to obtain some sand cover for the seed. Feneprime is then applied in moderate quantity to hold back rain water erosion. This worked best; however, once the the green blades of grass begin to show no additional coat of Peneprine can be made or the grass will die as cited above. Other types of seed were also experimented with to determine if another variety would be more suitable for this hydraulically drodged sand. Bermida grass consistently provided the best results.

(c) <u>RECOMENDATION</u>. That bermida grass seed with Peneprime be used for a relatively inexpensive and durable solution to soil control of hydraulically dredged sand

For Official USE DALLY

For Official USE ONLY

IGFB-OP

15 November 1968 SUBJECT: Operational Report of 93d Engineer Battalion for Poriod_Finding 31 October 1968; RCS CS FOR - 65 (RI)

(3) Expedient Tire Patch

(a) ORSERVATION. When in the field, tires for engineer equipment become scarce and expedient means of ratching tubeless tires become necessary.

(b) EVALUATION. To accomplish the mission, a tubeless tire can be patched temporarily by use of T-17 membrane. Cut out a piece of membrene large enough to allow several inches coverage around the cut or puncture and apply an ample cost of membrane glue. Hold the membrane firmly against the tire until dry, replace the tire on the wheel rim, and fill with air. In one instance, a front loader ran for 7 days with no air leak with one tire petched in this feshion.

(c) RECOMMENDATION. That engineer units be advised of the feasibility of using scrap picces of T-i7 as emergency tubeless tire patches.

(4) <u>Control Tower</u>

(a) OBSEL STION, Experience demonstrated that the construction time for a wooden 50' pirfield control tower was lengthy. In order to accolerate construction time, a prefabricated steel tower, excess to water tower requirements, was adopted and used in the construction of a control tower.

(b) EVALUATION. The originally designed water tower was 36 feet for a wind loading of 150 mph to provide an adequate structure for the rotor wash of any helicoptor flying near by. This analysis resulted in 6' x 4' x3' footers to meet the criterion for prevention of overturning. Additionally, commentional steps had to be designed to sugment the rether susters steel ladder provided by the water tower set. The steps were huilt around the exterior of the structure in stricese fashion. The suprorts were fabricated from angle iron and welded to the less of the tower and cantilevered out away from the tower less. Doubled 2"x 12" lumber was used as support for the stairs and was mounted on the centilevered angle iron. A welk-through was used on the third tier to bureas the steel ledder. Inclosure 9 shows the commileted tower. The tower is commiletiv setisfectory as modified and received accolades from FAA personnel. Its cost was approximately 50% of the orginally programmed cost.

(c) RECOMMENDATION. That future control tower projects utilize the prefeb metal towars modified as necessary to provide a quick construction time, low cost and entirely adequate tower.

(5) Aircreft Meintonence Hengers

(a) ORSERVITION. The 93rd Engineer Pettalion has recently been , ongaged in the construction of sircraft maintenance hangars. The standard

FOR Official USE DALLY

EGFB-OP SUBJECT:

15 November 1968 Uperational Report of 93d Engineer Rettalion for Feriod Ending 31 October 1968; RCS CS FOR - 65 (RI)

design called for a roof consisting of four rows of trusses, as shown at Inclosure 10.

(b) EVALUATION. Two hangers were constructed simultaneously using the design and it proved to be unsatisfactory from a standpoint of effort required to fabricate the L similar trusses and to waterrrdof the troughs between the roofs. The original design specified a rectangular channel between the trusses to handle runoff. The channel was constructed of plywood with a roof paper 3 ply covering. It was found that water would pond along the channel, due to inadequate slope, and then leak through to the hanger. Also the corruptions of the sheet metal left open spaces where it seated against the purlins and water could srlesh up through the openings. A modified roof was designed by the 93rd Engineer Battalion (Const), approved and employed on subsequent hangers built. The roof consists of one large truss, constructed in four sections and surrorted at five points as shown at Inclosure 11. It was found that edenuate runoff would occur if the trusses were constructed with a 1:12 slope.

(c) RECOMMENDATION. That continues slope roof design he used in lieu of the multiple design whenever feasible. The result is simpler construction, case of maintenance and a more esthetic structure.

(6) Pascoe Buildings

(a) OPSERVATION. The pre-engineered Fascoc huildings come without metal siding. To complete the huilding requires constructing a wooden side or adding additional corrugated sheet metal to complete the sides and end walls. However, since the huilding is pre-engineered with a roof liner it is possible to adapt that to siding.

(b) EVALUATION. The roofing liner works well as siding material. The 21 foot lengths of Pracee metal braten construction of the building, especially when used with 4 x 6 studs on approximately 10° centers. Experience of the 93rd indicates the double roof is unnecessary in Vietnam for either normal open sided or closed storage areas.

(c) RECOMMENDATION. That this liner be adorted for use as siding as a standard design.

c. Training:

(1) Mentatory Incountry Training

(a) OBSERVATION. Incountry training for newly arrived individuals required by HQ USARV is beyond the normal training capability of an overating construction bettelion. The latest annual General Inspection also noted this situation. Throwsh coordination with the local major tactical unit, the 9th Infantry Division, the 93d Engineer Battalion is provided in country training at Divisional facilities.

(b) EVALUATION. The quality of facilities and derth of experience of instructors at the 9th Division Facility (The Beliable Academy) for outstrive the in-house capability of the Bettelion to train personnel. Well Official 9 USE ONLY

FOR OFFICIAL USEONLY

ECTB-CP

15 November 1968 SUBJECT: Operational Report of 93d Engineer Pattelion for Feriod Finding 31 October 1968, RDS CS FON - 65 (RI)

(c) RECONDENDATION. That all Non-Divisional Engineer Battalions be satellited upon a local tactical unit for indial individual incount me treining. d. Intelligence: None

e. Losistics: Nonc

f. Organization: None

g. Other: None

H H. SIEVERS. ITC, CE

11 Incls ***/**0--Inc 2 - 11 wd Hq DA

Commanding

FOR OFFICIAL USE ONLY

ECF-OF (15 Nov 68) 1st Ind SUBJECT: Operational Report - Lessons Learned RCS CSFOR-65(R1) for Quarterly Period Ending 31 October 1968

DA, HEADQUARTERS, 34th Engineer Group (Const), APO 96291, 29 November 1968

TO: Assistant Chief of Staff for Force Develorment, Department of the Army, Washington D.C., 20310 Commanding Officer, 20th Engineer Brigade, ATTN: AVBI-OS, APO 96491

1. The subject report by the 93d Engr Bn has been reviewed by this H^O and is considered comprehensive and of value for documentation and review of the reporting unit's activities and experiences.

2. This HQ concurs with the submitted report with the comment that all of the recommendations stated in the "Commanders Observations" are considered noteworthy to merit possible army-wide adoption. No additional amplification is necessary by this HQ as the recommendations are self explanatory and the resultant benefits obvious.

FOR THE COMMANDER:

EMERY Major, AGC Adjutant

Copy Furnished: CO, 93d Engr Bn AVBI-OS (15 Nov 68) 2nd Ind SUBJECT: Operational Report - Lessons Learned, RCS CSFOR-65(R1) for (uarterly Period Ending 31 October 1968)

DA, HEADQUARTERS, 20TH ENGINEER BRIGADE, APO 96491 10 December 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVHEN-MO, APO 96375

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

2. Subject report for the 93rd Engineer Battalion (Construction) has been reviewed and is considered adequate.

FOR THE COMMANDER:

RICHARD E. TAYLO

1LT, AGC V Assistant Adjutant AVHGC-DST (15 Nov 68). 3d Ind SUBJECT: Operational Report of 93d Engineer Battalion for Period Ending 51 October 1968, RCS CS FOR - 65 (R1)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 10 JAN 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 October 1968 from Headquarters, 93d Engineer Battalion (Const).

2. Reference item concerning rotational humps, page 6, paragraph 2a(1). Nonconcur. A 21% rotational hump exists in the 93d Engineer Battalion for February, 1969. Similar sized humps also exist in ten other battalions within the 20th Engineer Brigade for February, April, and May, 1969. An 16% hump exists for the Brigade overall in April. Computerising assignments will not correct the basic problem. A letter was dispatched on 31 December 1968 from this headquarters to CG, 20th Engineer Brigade requesting that aggressive action be taken to reduce excessive rotational losses. Close monitorship of the infusion progress of the 20th Engineer Brigade is in effect.

FOR THE CONSIGNER:

8 Butte

A.R. GUENTHER CPT. AGC ASST. ADJUTANT GENERAL

Cy furn: HQ 20th Mngr Bde HQ 93d Mngr Bn (Const)

GPOP-DT (15 Nov 68). 4th Ind SUBJECT: Operational Report of HQ, 93d Engr Bn (Const) for Period Ending 31 October 1968, ECS CSFOR-65 (R1)

HQ, US Army, Pscific, SPO San Francisco 96558 24 JAN 1968

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

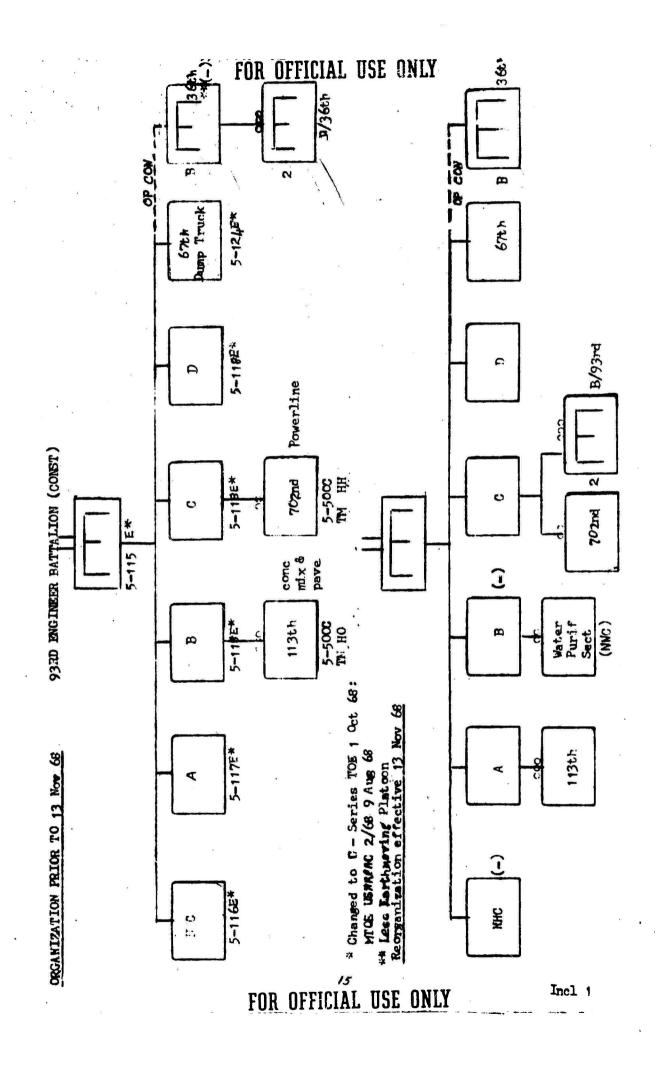
This hesdquarters has evaluated aubject report and forwarding indorsements and concurs in the report as indoraed.

FOR THE COMMANDER IN CHIEF:

n. Ala ka

C. L. SHORT

CPT, AGC Asst AG



UNCLASSIFIED	
Becurity Classification	
DOCUMENT CONTROL DATA - R & D (Beautity elasellisation of little, body of abotrast and indusing annotation musi be entered when the overall report is classified)	
. ORIGINATING ACTIVITY (Corporate author)	2. REPORT SECURITY CLASSIFICATION
· · · · · · · · · · · · · · · · · · ·	For Official Use Only
HQ, OACSFOR, DA, Washington, D.C. 20310	FOUO Cancelled 15 Nov 1971
REPORT TITLE	
Operational Report - Lessons Learned, Hea	adquarters, 93d Engineer Battalion (Const)
4. DESCRIPTIVE HOTEL (Type of report and inclusive deves)	
Experiences of unit engaged in counteringues AUTHOR(S) (Fire name, middle milist, last name)	irgency operations, 1 Aug - 31 Oct 68
CO, 93d Engineer Battalion (Const)	•
S. REFORT DATE	74. TOTAL NO. OF PAGES 75. NO. OF REFS
15 November 1968	18 DE ORIGINATOR'S REPORT NUMBER(3)
na ana inaki an kana i aya	New Origina I AN & DEFORT NUMBER(3)
S. PROJECT NO.	684228
e. N/A	
	this report)
d.	
11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
N/A	OACSFOR, DA, Washington, D.C. 20310
13. ABBTRACT	
1	•
· · ·	
	•
	•
16	
	· · ·
DD 1 NOV -1473	UNCLASSIFIED
	Security Classification

and the start of the second

- -