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

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:

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

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UNCLASSIFIED REPORT
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ASSISTANT CHIEF OF STAFF FOR FORCE DEVELOPMENT
(ARMY) ATTN FOR OT UT. WASHINGTON, D.C. 20310
The Battalion remained at Dong Tam Base, RVN (XS L7L1) 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. Ewell, made an urgent request for sufficient engineer effort to permit completion of the priority essential construction necessary for the most basic support of sustained operations by the end of December 1968, with a majority of the effort to be completed by 1 December. An earlier request in June 1968 resulted in the stationing of two 6th Engineer Battalion (Combat, Army) companies on Dong Tam Base for the purpose of vertical construction during the rainy season. These companies (4th and 5th) came off the rehabilitation of route "61" 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 93rd Engineer Battalion. The 93rd continued to requisition the supplies to be used on these projects but issued the material to the 6th. Site and building read preparation for the structures to be built by the 6th was performed by the 93d as earth moving capability of the 6th was fully employed in combat and operational support projects in Long Tien Province and in the construction of the Binh Due 0-123 portable airfield.

To further support preparation of a full support facility at Dong Tam for the 9th Division, the 31st Engineer Group (Construction) relocated a specially tailored construction company of the 36th Engineer Battalion (Construction) from Vung Tau to Dong Tam and placed it under the operational control of the 93d. The company consisted of the headquarters and the two
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' x 96' pre-engineered maintenance buildings for the 708th Maintenance Battalion, 6 - 40' x 96' pre-engineered storage buildings for the 9th Supply and Transport Battalion, and 2 - 80' x 96' helicopter maintenance hangars for the 9th Aviation Battalion. This construction was scheduled for a 1 December completion. The 93d provided site preparation, building pads, 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 Detachment (Concrete Mixing and Paving) to the Battalion on 10 September. The 113th was detached from the 79th Engineer Group (Construction) and attached to the 31st 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 batch plant on 16 September, the 93d had operated two separate concrete mixing plants of 4 and 5 each 165 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 165 mixer to be used. Each mixer was able to produce a dump truck load of 3 cubic yards of wet 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 about 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 dump trucks in support of both engineer troops 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 alert to relocate B Company from Dong Tam, the plant continued its operations. The 113th was detached and attached to A Company. This detachment proved to be a more workable and practical arrangement. The responsiveness of maintenance and repair provided by the direct support capability in A Company is essential for the continued operation of the complex batch plant with its unique equipment and parts requirements. The plant was operated without any down times 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 Detachment (Power Line) remained attached throughout the period. It was further attached to C Company which had responsibility for constructing the power distribution system. The 12 man, 1 officer detachment 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 Battalion was able to obtain additional equipment...
in September which allowed major expansion of the operation. The principal additional equipment were coffering hoists and a signal line truck. In place of a pole setting crew and one to two teams working on the pole climbing tasks, the task was organized into a pole 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 augmented operation. With the exception of pole setting, assigned to A company, the task remained C company's responsibility with the 706th Detachment providing the control and trained nucleus. The additional personnel assigned received their pole climbing and electrical training on the job.

Flexibility in assignment of tasks for construction was partially limited by the number of large manhour projects. Projects such as hangars, power 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: A Company had 3 platoons on the helicopter and revetments; C Company had two platoons on the power plant and the 706th on the distribution system; and B Company had one construction platoon on two hangars and the other about to be fully committed to the water plant, system, and storage towers. The 9th Division, as the sole customer, provided a priority list of projects which covered effort available between July and December which alleviated the lack of flexibility in the battalion employment. The 36th Group used the 96th Engineer Battalion (Combat, Army) and the 9th Division used the 19th Engineer Battalion (Combat, Divisional) for emergency and other, off-Dong Tan 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 Company was available for a succession of priority, smaller scale efforts. The change from the heliport to vertical construction also brought a marked lift to the unit's morale which had reflected the engagement, for at least part of the company, on the heliport since February. The company quickly completed 11,520 square feet of maintenance building for F Co, 706th Maintenance Battalion; a 3,040 square foot Divisional Medical Supply Warehouse; a 3,800 square foot electronic maintenance facility for H Co, 709th; and 4,836 square feet of dry kennels for the 15th Scout Dog Platoon; and 4,000 square feet of operations buildings for the 214th Aviation Battalion.

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 primarily used in materials haul, particularly the movement of rock from barge site to stockpiles on Dong Tan, from swamp to loading pier in Vung Tau, C Company's rehabilitation and upgrading of Routes TL 22 and TL 25 adjacent to Dong Tan, and in support of the 15th and 86th Engineers. Continual dump truck support was provided the 156th for movement of sand from Dong Tan to My Tho and movement of laterite from Dong
Thân North borrow pits to Long An province projects. Concrete haul was another major daily requirement for dump trucks.

The heavier earth grading and moving equipment was continuously employed in road upgrades on Dong Tam and routes TL 22 and TL 25 (until taken over by the 66th Engineer Battalion), site and pad preparation for all buildings under construction at Dong Tam other than by contract, entrenching for the water distribution system, and for filling revetments and bunkers, construction of a protective berm around Dong Tam (in support of a 15th Engineer Battalion (Divisional) Operation effort), and in sand-cement stabilization. Earth moving platoon personnel were also engaged in replacement of bridges by culverts and pouring mass shell slabs (C Company), placing P-17 membrane overlain by NBAI meting 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 prep, a 100' x 4000' helicopter active runway, and stabilized hardstands for helicopter maintenance hangars.

Battalion operations were not disrupted by enemy activities during the period. The Battalion expended 45,363 MH on base camp security, 25,677 MH on job site security, and 11,092 MH on improving the security of its sector of the Dong Tam base perimeter. The principal form of enemy activity continued to be infrequent mortar and rocket attacks on Dong Tam. The battalion suffered 5 wounded, all from one mortar round on Dong Tam, and minor damage to property in unit areas or on construction projects. The most significant damage occurred during a mortar attack on 26 August when the power plant site received approximately 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 power generation equipment. The 67th Engineer Company's Dump Truck platoon in Vung Tau had considerable damage to stored vehicular parts as a result of a rocket attack on 19 October.

The battalion was alerted in October to be prepared to send a tailored company to Hoc Hoi in support of the Dry Season 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 "prepared" orders were issued for the attachment of the other construction platoon and that earthmoving equipment not going on the first lift to C Company.

Continuing tasks were assigned among the various companies. 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 C-Series T1E and the approved USRENFAC T1E 2/68, 9 August 1968 added wheeled vehicle 3d echelon responsibility to its engineer equipment responsibility. The battalion continued...
SUBJECT: Operational Report of 93d Engineer Battalion for Period Ending 31 October 1966, RCS CS FOR 4-66 (AI)

to support self-help construction of huts and mess halls on Dong Tam through the issuance of materials, site preparation and technical advice and assistance. The battalion provided additional services at Dong Tam 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 concurrency or use of partially completed structures was normal as construction was concurrent to the closure of the service units at Dong Tam.

A few construction directives for MCA funded construction essentially covered the full scope of the entire Dong Tam base development. These were further concentrated by publication of a single consolidative directive (scope at enclosure 4) which provided the authority and basis for extensive construction effort. The 9th Infantry Division Base Development office for Dong Tam prepared the requests for the construction, prepared the Division's priority for their accomplishment, and sites the structures on the overall base development map. A very close liaison 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 battalion continued to provide the construction material logistic support for a level of effort for above that of its own units. The battalion supplied half of 34th Engineer Group's vertical construction capability (9 of 18 construction platoons and 6 of 12 combat platoons) used most of the cement delivered to the Delta, and was the largest user of crushed rock in the Delta. Principal material transportation was by barge from Vung Tau, supplemented by 93d and contract truck convoys from depots in the Long Binh and Vung Tau areas. The battalion required approximately 570,000 board feet of assorted lumber, 6,000 cubic yards of rock, 92,000 bags of cement, and 600 barrels 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 period. Principal changes were: MAJ Robert C. Trippe, CT, 0570018 to Bn XO, vice MAJ Robert A. Winslow, CT, 0550761. CPT William J. Miller, CT, 0672 to Bn S-4, vice CPT, Kreig H. Hansen; CE, 0659912; MAJ Darrell J. Dyer, BG, 0671950 to Bn CSM, vice LTC, Roy B. Roman, CT, 0572336 who remained CO, REM; LTC Eugene H. Heine, CT, 0674459 to CO, D Co, vice CPT Henry H. Mellon, CT, 0574485. Battalion administration was facilitated by being essentially concentrated at Dong Tam following a six month transition when the battalion was split between Long Thanh North, in Bien Hoa Province and Dong Tam. Basic personnel and administrative statistics are given at enclosure 5.
2. Section 2. Lessons Learned: Commander's Observations, Evaluations, and Recommendations

a. Personnel

(i) Rotational Humps

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

(b) EVALUATION. The personnel imbalance creates a chain of unfavorable actions. To minimize the rotational humps impact, infusion programs between like units must be initiated. These assignments cause experienced personnel to be pulled abruptly off a job for which they were trained 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 mismanagement in the personnel field, shortens the effective length of the tour and lessen 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 Vietnam should receive grass root benefits at the earliest possible time.

b. Operations

(i) Sand Cement Stabilization Procedure

(a) OBSERVATION. Sand cement stabilization provides an excellent base course for hardstands, road and airfield facilities but is a slow, time consuming procedure.

(b) EVALUATION. A good proportion of time is required in the dechipping process. If cement were available in bulk, over 50 per cent of the manhours in the sand cement stabilization process would be saved. In lieu of bulk cement a dechipping and laydown process was developed by the 93d Engineer Battalion to optimize equipment usage while minimizing the manual task time. Incluse 6 depicts the dechipping process. Palletized cement bags are dropped off the pallets onto the bucket of a front loader. The bucket has been fitted with one of the metal cement pallets. In the pallet a pointed knife has been mounted which breaks open the bags upon impact. The bucket holds the contents of approximately forty 110-pound cement bags. The front loader then empties its load into a 30CM scraper as shown at Incluse 7. This procedure is repeated until the scraper is filled with cement. Alternating crews and using multiple front end loaders and scrapers proportionately increases production. An additional benefit is reaped since the debris of used cement bags and
SUBJECT: Operational Report of 93d Engineer Battalion for Period Ending 31 October 1963; RCS OS - 65 (RI)

pallets is centralized at the cement stockpile instead of having these items stream all along and through the worksite. This latter condition occurs when debagging is done along the area to be stabilized. Illustration 8 illustrates the cement laydown procedure with the 290K tractor and scraper. In this case a 1 to 10 ratio of cement to sand was used which requires approximately 1/4" to 2" of loose cement 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 cement 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 enclosures, wherever applicable.

(2) Grass Seed and Penetprime for Soil Control

(a) OBSERVATION. Considerable difficulty has been experienced with stabilization of hydraulically dredged sand. It has been particularly difficult due to erosion under the heavy rains of Vietnam 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; Penetprime.

(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. Penetprime worked well except it tends to "pick up" when trafficked on and needs constant reaplications of Penetprime to cover new 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 Penetprime was applied over new grasses it cut the new grass off from the sunlight it required for growth. From the experience of the 93d 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. Penetprime is then applied in moderate quantity to hold back rain water erosion. This worked best; however, once the green blades of grass begin to show no additional coat of Penetprime 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 dredged sand. Bermuda grass consistently provided the best results.

(c) RECOMMENDATION. That bermuda grass seed with Penetprime be used for a relatively inexpensive and durable solution to soil control of hydraulically dredged sand.
(3) **Expedient Tire Patch**

(a) **Observation.** When in the field, tires for engineer equipment become scarce and expedient means of patching 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 membrane large enough to allow several inches coverage around the cut or puncture and apply an ample amount 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 patched in this fashion.

(c) **Recommendation.** That engineer units be advised of the feasibility of using scrap pieces of T-17 as emergency tubeless tire patches.

(4) **Control Tower**

(a) **Observation.** Experience demonstrated that the construction time for a wooden 50' firefield control tower was lengthy. In order to accelerate 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 high. To achieve the additional height a section of a second tower was spliced onto the first tower. The resultant tower was analyzed for a wind loading of 150 mph to provide an adequate structure for the rotor wash of any helicopter flying near by. This analysis resulted in 6' x 4' x 3' factors to meet the criterion for prevention of overturning. Additionally, conventional steps had to be designed to augment the rather austere steel ladder provided by the water tower set. The steps were built around the exterior of the structure in stairs fashion. The supports were fabricated from angle iron and welded to the legs of the tower and cantilevered out away from the tower legs. Double 2x12 lumber was used as support for the stairs and was mounted on the cantilevered angle iron. A walk-through was used on the third tier to house the steel ladder. Enclosure 9 shows the completed tower. The tower is completely satisfactory as modified and received accolades from FAA personnel. Its cost was approximately 50% of the originally programmed cost.

(c) **Recommendation.** That future control tower projects utilize the prefab metal towers modified as necessary to provide a quick construction time, low cost and entirely adequate tower.

(5) **Aircraft Maintenance Hangars**

(a) **Observation.** The 93rd Engineer Battalion has recently been engaged in the construction of aircraft maintenance hangars. The standard
design called for a roof consisting of four rows of trusses, as shown at Enclosure 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 4 similar trusses and to waterproof 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 corrugations of the sheet metal left open spaces where it seated against the purline and water could splash 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 supported at five points as shown at Enclosure 11. It was found that adequate runoff would occur if the trusses were constructed with a 1:12 slope.

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

(6) Pascoe Buildings

(a) OBSERVATION. The pre-engineered Pascoe buildings come without metal siding. To complete the building requires constructing a wooden side or adding additional corrugated sheet metal to complete the sides and end walls. However, since the building is pre-engineered with a roof liner it is possible to add that to siding.

(b) EVALUATION. The roofing liner works well as siding material. The 21 foot lengths of Pascoe metalosen 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 adopted for use as siding as a standard design.

c. Training:

(1) Mandatory In-country Training

(a) OBSERVATION. In-country training for newly arrived individuals required by HR USAVE is beyond the normal training capability of an operating construction battalion. The latest annual General Inspection also noted this situation. Through coordination with the local major tactical unit, the 9th Infantry Division, the 93rd Engineer Battalion is provided in country training at Divisional facilities.

(b) EVALUATION. The quality of facilities and depth of experience of instructors at the 9th Division Facility (The Reliable Academy) far outstrips the in-house capability of the Battalion to train personnel.
(c) RECOMMENDATION. That all Non-Divisional Engineer Battalions be satellite upon a local tactical unit for initial individual unit training.

d. Intelligence: None

e. Logistic: None

f. Organization: None

g. Other: None

Ralph H. Sievers, Jr.

IPC, CE

Commanding
BQF-OT (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 Development, 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 HQ 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:

William E. Kryzy
Major, AGC
Adjutant

Copy Furnished:
CO, 93d Engr Bn
AVBI-CS (15 Nov 68) 2nd Ind
SUBJECT: Operational Report - Lessons Learned, RCS CSFOR-65(R1)
for Quarterly 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:

[Signature]
RICHARD E. TAYLOR
1LT, AGC
Assistant Adjutant
This headquarters has reviewed the Operational Report—Lessons Learned for the quarterly period ending 31 October 1968 from Headquarters, 93d Engineer Battalion.

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 18% hump exists for the Brigade overall in April. Computerizing assignments will not correct the basic problem. A letter was dispatched on 31 December 1968 from this headquarters to CO, 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 COMMANDER:

A.R. GUENTHER
CPY. AGC
ASST. ADJUTANT GENERAL
GPOP-DT (15 Nov 68), 4th Ind

SUBJECT: Operational Report of HQ, 93d Engr Bn (Const) for Period Ending 31 October 1968, RCS CSPOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558  24 JAN 1968

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

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

C. L. SHORTT

CPT, AGC

Ann AG
ORGANIZATION PRIOR TO 13 Nov 68

93RD ENGINEER BATTALION (CON)T

5-115 E*

5-116 E* 5-117 E* 5-118 E* 5-118 E*

C  A  B  C  D

67th Dump Truck

5-124 E*

2

113th 702nd Powerline

5-500C TM HH

36th

MHC A B C D 67th B

113th

Water Purif Sect (MHC)

200 702nd 2

1. Changed to C - Series TOE 1 Oct 68
2. MICE USNR/USC 2/68 9 Aug 68
3. Less Earthmoving Platoon
4. Reorganization effective 12 Nov 68

FOR OFFICIAL USE ONLY
**Operational Report - Lessons Learned, Headquarters, 93d Engineer Battalion (Const)**

Experiences of unit engaged in counterinsurgency operations, 1 Aug - 31 Oct 68

- **CO, 93d Engineer Battalion (Const)**

**Contract or Grant No.:** N/A

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