<table>
<thead>
<tr>
<th>UNCLASSIFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD NUMBER</td>
</tr>
<tr>
<td>AD831873</td>
</tr>
<tr>
<td>LIMITATION CHANGES</td>
</tr>
</tbody>
</table>

TO:
Approved for public release; distribution is unlimited.

FROM:
Distribution authorized to U.S. Gov't. agencies and their contractors; Critical Technology; 24 MAR 1967. Other requests shall be referred to Assistant Chief of Staff for Force Development (Army), Attn: FOR-OT-RD, Washington, DC 20310. This document contains export-controlled technical data.

AUTHORITY
AGO D/A ltr, 29 Apr 1980
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.
IN REPLY REFER TO AGAM-P (M) (21 Mar 67) FOR OT 24 March 1967

SUBJECT: Operational Report - Lessons Learned, Headquarters, 809th Engineer Battalion (Construction)

TO: SEE DISTRIBUTION

1. Forwarded as inclosure is Operational Report - Lessons Learned, Headquarters, 809th Engineer Battalion (Construction) for quarterly period ending 31 January 1967. Information contained in this report should be reviewed and evaluated by CDC in accordance with paragraph 6f of AR 1-19 and by CONARC in accordance with paragraph 6c and d of AR 1-19. Evaluations and corrective actions should be reported to ACSFOR OT within 90 days of receipt of covering letter.

2. Information contained in this report is provided to the Commandants of the Service Schools 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

1 Incl

a/s

DISTRIBUTION:

Commanding General
US Army Command and General Staff College
US Army War College
US Army Air Defense School
US Army Artillery and Missile School
US Army Armor School
US Army Chemical Corps School
US Army Engineer School
US Army Military Police School
US Army Infantry School
US Army Intelligence School
US Army Medical Field Service School

(Continued on page 2)
Section I: SIGNIFICANT UNIT ACTIVITIES

1. General:

a. At the end of this period the battalion continues construction on Camp Vayama and the Ammunition Storage Facilities in the vicinity of Sattahip. Company C has been consolidated at the battalion base camp, Camp Charn Sinthope, from northeast Thailand after completing the Special Forces camp and the general construction work and earthwork on the POL project at Nakhon Phanom. Responsibility for completion of the northeast base camp, Camp Ruam Chit Chai, was turned over to the 561st Engineer Company (Construction) and completion of the Nakhon Phanom POL project was turned over to the 697th Engineer Company (Pipeline). In addition, the Sattahip POL project was completed.

b. During this period the battalion received additions to the scope of work in Camp Vayama, the Terminal facilities, and the Ammunition Storage Facilities in Sattahip. Four repair and maintenance projects for the battalion base camp were approved. Verbal instructions were received in early January to commence construction operations on the Inland Road.

2. Personnel:

a. During the period of this report, the personnel strength of the battalion decreased to 620, 79% of authorized strength under TOE 5-1153 as augmented by USARPAC GO 285, 1965. The personnel strength of this command at the beginning and end of the reporting period is shown below:

<table>
<thead>
<tr>
<th></th>
<th>AUTHORIZED</th>
<th>PRESENT FOR DUTY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Nov 66</td>
<td>23 Jan 67</td>
</tr>
<tr>
<td>Officers</td>
<td>25</td>
<td>27</td>
</tr>
<tr>
<td>Warrant Officers</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Enlisted</td>
<td>755</td>
<td>654</td>
</tr>
<tr>
<td>Total</td>
<td>788</td>
<td>688</td>
</tr>
<tr>
<td></td>
<td></td>
<td>699</td>
</tr>
</tbody>
</table>

b. The battalion has been assigned the mission of constructing 122 KM of inland road linking the seaport of Sattahip with the Bangkok Bypass Road. Critical shortage of noncommissioned officer supervisors,
MOS 51H40, and construction equipment operators, MOS 62E20/30, seriously reduce this command's operational capability. This has been the subject of command letters, and was pointed out in the Operational Report for Quarterly Period Ending 31 October 1966 and in the previous two Unit Readiness Reports.

c. A critical need for trained personnel also exists in the medical and construction survey areas.

d. There have been numerous instances of late receipt of assignment instructions for personnel returning to CONUS. Personnel have been required to remain in this command up to 2½ months after date due CONUS pending receipt of such instructions. The policy of reporting personnel for reassignment appears adequate.

3. Operations:

a. Construction Activity in Sattahip

(1) 1000 Man Cantonment Area, Camp Vayama, Sattahip, JD 44/66/8:

Building construction and site development continued throughout November, December, and January. Company B continued the construction effort on this project. At the beginning of the period the large majority of the original billet and messhall space was completed. During this period the project was expanded to include a 10-unit, GP medium tent camp and facilities for 200 additional Thai Security Guards. Concurrently, vertical construction effort continued on the community facilities. The Thai Security Guard area and the tent camp were standard light frame buildings and were completed easily during this period. The community facilities, however, are of non-standard design and construction is progressing more slowly. Buildings completed during this period include the Enlisted Men's Club, Chapel, Hospital, APO Building, two company areas, and the tent camp. At the close of the period all buildings included in the current scope of the project were either completed or under construction, with the exception of the telephone building for which plans have not been received, and the firehouse. To date one hundred and forty-two (142) buildings are complete for a percentage of 87%. The water distribution system is 90% complete, the sewer line is 80% complete and the electrical distribution system is 80% complete. The fill for the camp area was completed with the aid of a civilian contract, necessitated by high priority earthmoving projects in other areas. See Inclosure 1.

(2) Signal Site, Sattahip, Thailand, JD 44/66/9:

Construction during this period included the completion of the security fence and security lighting around Hill 100. This completed all construction on the hill itself and left only the access road to be repaired. Little progress has been made on this due to higher priorities on other earthmoving projects.
(3) POL Storage Facility, Sattahip, Thailand, JD 44/66/10:

This project was completed during this period with the completion of the perimeter security lighting. The lack of digging and pole-setting capability hindered the completion of this project for a considerable length of time.

(4) Terminal Buildings (Phase III) Sattahip, Thailand, JD 44/66/19:

The job directive for the third phase of this project was received during this period. The scope of the project is the construction of three additional 20' x 48' standard buildings in the Terminal area. To date materials have been ordered for the project and construction is to begin upon their arrival and the availability of construction personnel.

(5) Ammè Storage Facility, Sattahip, Thailand, JD 44/66/30:

The project was begun on 1 August 1966 and the present scope of work includes 35 ammo storage pads and 7.9 kilometers of main and lateral roads. At the close of the period, 24 pads were complete, 21 culverts were in place and the entire reach of the road was under construction. A civilian fill contract was let during the period and a total of 55,000 cubic meters of fill had been hauled into the site. Civilian equipment was also contracted to supplement the battalion's TO&E capability. Company B is responsible for the construction with a portion of Company C earthmoving platoon attached. A decision has been made to place an asphalt surface treatment on the roads. The type treatment is to be determined by test. Problems with construction can be generally attributed to old condition of the earthmoving equipment and the problems of acquiring repair parts. See Inclosure 2.

b. Construction Activity, Northeast Thailand

(1) Sakon Nakhon Base Camp, JD 44/66/37:

At the beginning of the period Company C was split in three locations in northeast Thailand. The Sakon Nakhon base camp project was left with a skeleton crew reinforced by local national laborers. These people were utilized in prefabrication operations while the Special Forces job was under construction. After the construction platoon from the Special Forces camp was consolidated again in Sakon Nakhon, a large number of the camp building sections had been prefabricated, so construction moved along rapidly. On 3 Jan 67 the project was turned over to the 561st Engr Co (Const). At that time the camp was 39% complete. Thirty-six (36) buildings were completed. Slow delivery of materials was a problem but many materials were arriving at the turn over date. See Inclosure 3.

(2) POL Facility, Nakhon Phanom, JD 44/66/57:

Progress on this project has been good. A construction platoon from Company C reinforced by a portion of Company C earthmoving platoon has accomplished the earthwork portion of the project and two
platoons of the 697th Engr Co (PL) have erected the tanks and fabricated the system. On 15 January Company C was withdrawn from the project and it was turned over to the 697th Engr Co for completion, at that point in time the earthwork and concrete work were 100% complete. The work remaining includes finishing tanks, cleaning & testing, and finishing the piping. Problems during construction were late material delivery caused in part by improper specifications for certain system parts given on the purchase requests. See Inclosure 4.

(3) Special Forces Camp, vic Sakon Nakhon, JD 44/66/61:

The scope of this project included the construction of a 70 man cantonment area including thirteen 20'x8' standard buildings, a mess hall, a shower room, necessary administration buildings, and exterior utilities systems. This project was high priority with a short time allowed for construction. Company C took prefabricated building sections from the Sakon Nakhon base camp and shipped them to the Special Forces site. Therefore they were able to complete the entire camp in twenty-four days and meet the scheduled BOD requirement. See Inclosure 5.

c. Construction Activity, Phanom Sarakham

(1) Inland Road, JD 44/67/1:

The construction task involves the construction of a military road from the Bangkok Bypass Road (in the vicinity of km 21) to Sattahip on the southern coast. The road includes a total of 122 kilometers through rice paddies, farm land and mountains. Problems in beginning a road of this scope are voluminous. The schedule for the entire road calls for a completion date of 31 Dec 67. Due to the urgency and high priority which this project enjoys, mobilization and preliminary construction operations were begun on or about 10 January 1967 on verbal instructions from the 44th Engr Cp. The preliminary operations were begun before any specific design was provided, therefore work schedules, estimates and equipment requirements were based on reconnaissance report of the A-E contractor. Full scale construction operations are scheduled to begin in February but are contingent upon the receipt of contract equipment on that date. More definitive planning and scheduling will be accomplished as more specific information is received on design, survey, drainage structures, and as soils personnel of this unit complete preliminary soils investigations (for foundation, borrow, and earthwork requirements).

Real estate negotiations for right-of-way access have progressed well under the system set up by the Royal Thai Army Liaison Officer with the 809th Engr Bn and the Royal Thai Highway Department real estate officials.

The preliminary construction operations on the first twelve kilometers consist of surveying (right-of-way and ditch line staking), borrow pit and soils investigation, clearing of the entire right-of-way, preliminary ditching, stripping, and minimal fill operations.

(2) Camp Charn Sinthope alterations and additions:
Since the decision was made to curtail the relocation of the battalion to the northeast in favor of remaining in its base camp for the construction of the Inland Road, various project requests have been submitted for repairing existing base camp facilities and adding needed facilities to the camp in order to make it usable for an indefinite period. To date the following repair and maintenance projects have been approved:

(a) 66/90, Troop Housing. This project is designed to repair all troop billets with ceiling, floors, screenwire, and other necessary repair.

(b) 66/91, Messhalls Repair. This project is for the renovation of three existing messhalls.

(c) 66/92, Secondary Electrical Distribution System Repair. This project is designed to relieve hazardous conditions, replace delapidated wire and balance the electrical loads on the power source.

(d) 66/93, EM Club Repair. This project is for the repair of the existing EM Club to be used as an NCO Club upon completion of a new EM Club.

These projects are self-help type and will be accomplished by R&U personnel, LN labor, and troop construction effort as available from other projects.

4. Supply:

a. During this period the overall supply situation has improved. Disposition instructions for uneconomically repairable ordnance and engineer equipment were received and the equipment was turned into the proper disposal activities with minimal delay. Adequate refrigeration equipment was received in the past two months to support the mess halls and ration breakdown. The 313th Trans Co has taken over all shipment of perishable rations from Bangkok to the ration breakdown point at Camp Charn Sinthope.

b. The shortage of the following major items of equipment will significantly degrade this organization's capability to accomplish its mission of constructing the Inland Road. To improve this situation a purchase request was submitted to rent approximately $5,000,000.00 worth of contract equipment.

TOE Major Items:

<table>
<thead>
<tr>
<th>FSN</th>
<th>NOMENCLATURE</th>
<th>AUTH</th>
<th>C/H</th>
<th>REQ NO</th>
<th>PRIOR</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2320-294-9552</td>
<td>Trk, tractor, 10 ton</td>
<td>15</td>
<td>8</td>
<td>6326-001 (AT0562-6333-7004)</td>
<td>05</td>
<td>UNK</td>
</tr>
<tr>
<td></td>
<td>(*) 5 ton ILO 10 ton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2320-835-8336</td>
<td>Trk, dump, 5 ton M51</td>
<td>47</td>
<td>42</td>
<td>6258-006 (AT0562-6271-7009)</td>
<td>05</td>
<td>UNK</td>
</tr>
</tbody>
</table>
| 2420-806-0031 | Tractor, whl, mil 830M | 35 | 20 | 6179-005  
| AT0562-6188-7005 | 05 | UNK  
| | 6347-006  
| AT0562-6350-7015 | 05 | UNK |
| 3805-678-6359 | Scraper, earth, towed | 24 | 15 | 6179-006  
| AT0562-6188-7003 | 05 | UNK  
| | 6320-002  
| AT0562-6327-5015 | 05 | UNK |
| 3805-879-2122 | Distributor, water, trk | 6 | 0 | 6322-007  
| AT0562-6326-7002 | 02 | UNK  
| | 6341-004  
| AT0562-6348-7000 | 05 | UNK |
| 3810-618-9147 | Crane shovel, basic unit, crlr mtd | 7 | 1 | 6237-001  
| AT0562-6250-5032 | 05 | UNK  
| | 6246-003  
| AT0562-6250-5038 | 05 | UNK |
| 3815-618-8100 | Boom, crane, crlr mtd, 50', 40 ton | 7 | 1 | 6246-006  
| AT0562-6250-5036 | 05 | UNK  
| | 6246-009  
| AT0562-6250-5033 | 05 | UNK |
| 3815-378-8700 | Bucket clamshell, 2 cu yd | 7 | 3 | 6246-009  
| AT0562-6250-5033 | 05 | UNK  
| | 6246-010  
| AT0562-6250-5041 | 05 | UNK |
| 3815-974-1240 | Raillead attachment, crane shvl crlr mtd, 40 ton | 7 | 2 | 6246-010  
| AT0562-6250-5041 | 05 | UNK  
| | UNK  
| | UNK |

**c.** During this last reporting period one hundred and five (105) Purchase Requests were prepared by this headquarters for equipment, construction supplies and Blanket Purchase Agreements.

**d.** Supply action for the construction of facilities in Sattahip have continued. Purchase Requests for supplies for the additional work required have been submitted to higher headquarters for processing.

**e.** Purchase Requests submitted for supplies for the POL Tank Farm project 9/66/57 have been fulfilled.

**f.** All the Purchase Requests for the NE Base Camp, project 9/66/37 have been submitted and all the supplies should be on site by 1 Feb 67.
5. Maintenance:

a. The maintenance facilities for this unit are not adequate. Request for a construction project to provide new shops, a repair parts facility and related items has been initiated.

b. The annual Command Maintenance Management Inspection was completed in December 1966 with all areas in this unit satisfactory.

c. The unit continues to have difficulty in obtaining multi-fuel engines and related parts.

d. The major maintenance problem stems from lack of repair parts and 80% of the equipment deadlined is deadlined for parts.

Section II: COMMANDER'S OBSERVATIONS AND COMMENTS

6. Personnel:

a. Throughout the period of this report, the 809th Engineer Battalion (Construction) has carried between 90 and 140 personnel in an "In-Transit" status. I strongly recommend that his command be authorized an across the board 10% increase in enlisted personnel to alleviate this situation.

b. An individual being held past his date due CONUS because of non-receipt of assignment instructions is cause for great concern since it has a highly detrimental effect on the morale of the entire battalion. I recommend that if assignment instructions are not received 30 days prior to an individual's port call, immediate follow up action be taken. If assignment instructions are still not received, I highly recommend that I be given authority to assign personnel directly to USAOEAPLISTA, Oakland, California.

7. Operations: Operational problems have been generally characterized by a lack of time allotted to planning at the outset of a particular project. Job directives, plans, and specifications are not received far enough in advance of proposed starting dates to allow proper planning of personnel use, equipment employment and material procurement and delivery. Experience has shown that a 45 day minimum lead time is necessary on nearly all material deliveries, and problems are inevitable when a project is begun without the proper materials on hand.
8. Logistics: During this period the necessity for adequate time to plan and procure materials for a project was again emphasized. The concurrent design, preparation of bill of materials, and procurement of materials with the actual construction has proved to be very inefficient. The most appropriate solution to this problem is to accomplish the planning of a project in time to allow for the required procurement lead time for materials. Based on experience in the past year the minimum procurement lead time should be 45 days.

5 Incl

ALBERT C LEHMAN
LTC, CE
Commanding
Thai Security Guard Area, Tent Camp, and a portion of Camp Vayama Project #44/66/A, Sattahip, Thailand
Camp Vayama, 1000 man Cantonment Area
Project #44/66/8, Sattahip, Thailand
Ammo Storage Facilities Main Road & Pads under Construction
Project #144/65/30, Sattahip, Thailand
Northeast Base Camp, Camp Ruam Chit Chai
Project #44/66/37, vic Sakon Nakhon, Thailand
Construction of Special Forces Camp
Project #44/66/61, vic Sakon Nakhon, Thailand