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

IN REPLY REFER TO

AGDA (M) (16 Jun 70) FOR OT UT 701150 22 June 1970

SUBJECT: Operational Report - Lessons Learned, Headquarters, 43d Signal Battalion, Period Ending 31 January 1970

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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

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

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DEPARTMENT OF THE ARMY
HEADQUARTERS 43RD SIGNAL BATTALION
APO 96318

SCCPV-NG-PK-C 11 February 1970

SUBJECT: Operational Report - Lessons Learned (43rd Signal Battalion) period ending 31 January 1970, RCS CSFOR-65 (R2)

SEE DISTRIBUTION

I. Section 1. Operations: Significant Activities:

a. General:

(1) The 43rd Signal Battalion was operational the entire reporting period of 92 days, providing communications-electronics support for USMACV Advisory Team and base camp communications for major tactical units of 1st Field Force in Kontum, Pleiku, Binh Dinh and Phu Bon Provinces. This mission has not changed from the previous reporting period.

(2) On 12 December 1969, MG Thomas Matthew Rienzi, CG 1st Signal Brigade visited Headquarters, 43rd Signal Battalion to participate in the dedication of the Pleiku Tandem Switching Center. General Rienzi congratulated the battalion on its contribution to the early activation of the Tandem Switch.

(3) On 13 January 1970, BG Jack A. Albright, Deputy CG, 1st Signal Brigade visited the 278th and 586th Signal Companies. During his visit he inspected communications centers and dial central offices that provide vital communications support to the 4th Infantry Division and other units.

(4) On 1 November 1969, CPT Ariel D. Hoisager assumed command of the 586th Signal Company replacing CPT Larry J. McAllister who was reassigned to 21st Signal Group Headquarters. After presenting the unit colors to CPT Hoisager, LTC Humphrey J. Martin, CO 43rd Signal Battalion, complimented the 586th for having a dial central office, communications center, a major VHF site, and a MARS Station that rank among the best in 21st Signal Group.

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b. Activities:

(1) Personnel and Administration:

(a) The battalion received approved MTOE's during the month of January. The new MTOE's provide for a major reorganization of the battalion. An Khe and Pleiku Signal Support Detachments will be formed while Companies A and C will be redesignated the 146th Signal Company and the 175th Signal Company, respectively. The authorized battalion strength under these documents increases from 948 to 949.

(b) Authorized and assigned strength as of 31 January 1970:

	Authorized	Assigned
Off	31	27*
WO	17	8
EM	900	851

* Denotes a critical shortage of Captains: 13 authorized, 9 assigned. Three captains DEROS in the first 35 days of the next reporting period.

(c) Increased replacements during the month of January enable the battalion to show the following net personnel gain for the reporting period:

Total gains - 194
Total loses - 146
Net gain - 48

(d) As a result of recent personnel gains and foreign service tour extensions the critical MOS shortage list has been reduced to 2 MOS's:

MOS	Title	Number Short
63C	General Vehicle Rapairman	3
52D	Generator Repairman	3

(e) During the period covered by this report promotion figures reflect the following:

82 EM promoted to the grade of E4
91 EM promoted to the grade of E5
18 EM promoted to the grade of E6
1 EM promoted to the grade of E7

(f) The battalion has had a total of 107 extensions of foreign service tours approved during this reporting period. The retention of experienced personnel has aided this battalion in mission performance.

(g) During the reporting period 31 Bronze Star Medals, 2 Purple Hearts, 64 Army Commendation Awards and 1 Air Medal were awarded to members of the 43rd Signal Battalion. At present 45 awards are pending approval by higher headquarters.

(h) Two C Company personnel were wounded when an enemy rocket propelled grenade exploded on the Kontum compound. These were the only battalion battle casualities of the reporting period. The battalion reported 7 injuries of a non-combat nature.

(2) Intelligence and Security:

(a) The southern sector bunker line of the 43rd Signal Battalion Pleiku compound was extensively recontructed. The old trench system which was a constant night time safety hazard and which filled with water during the monsoon season, was filled with dirt. A sandbad dirt-filled barrel perimeter wall was constructed in its place. The wall provides concealment and cover to troops moving between bunkers. Additional barbed wire, concertina, and trip flares have been installed.

(b) Operation order (1-70) was published which provides for the integrated defense of the MACV/Tropo Hill Defense Compound. The order tasks all organic, attached and tenant units on the MACV/Tropo Hill Defense Compound. The three major units; HHD, A Company, and a detachment from the 361st Signal Battalion have further expanded this operation order for their sectors of the MACV/Tropo Hill Defense Area.

(c) A new C Company defense plan was prepared and submitted to the 24th Special Tactical Zone Senior Advisor for approval and incorporation into the overall defense plan of the Kontum Area. With the approach of TET, increased emphasis on physical security plans has been implemented to insure that everyone knows what is expected of them if an attack occurs.

(d) The 43rd Signal Battalion substantially increased its defensive posture by issuing each man a 5.56mm M16A1 rifle. Familiarization firing was conducted on weapons issue day. Battle sight zero was set on each weapon at this time. The 7.62mm M14 rifles previously used by the battalion were turned in.

(e) Security improvements made throughout the battalion included:

(1) PSP and sandbag reinforcement of Camp Enari, Dragon Mountain, An Khe, and Kontum bunkers.

(2) Additional perimeter lights at An Khe, Pleiku, and Kontum.

(3) Revetments built around the Hon Cong Mountain generators, the Pleiku MRC-85 generator vans, and the Pleiku enlisted billets.

(4) Defoliation of perimeters by burning.

(5) Rome plowing of a major portion of the greenline defensive perimeter at An Khe.

(6) Concrete mounts and sandbagged back-blast shields for claymore mines on Hon Cong Mountain.

(7) An increase in man-hours spent on perimeter guard. The 586th Signal Company manned two additional greenline bunkers. The 278th Signal Company provided 34,000 man-hours for base camp defense at Camp Enari.

(3) Organization:

(a) The Pleiku West detachment of A Company was deactivated on 1 January 1970. The detachment provided manual telephone switching service to subscribers in the Pleiku West area and limited access into the Pleiku Dial Telephone System. These services were no longer required when the Pleiku Dial Central Office expansion cutover gave dial telephone service to all US Military units in Pleiku. The deactivation allowed the switchboard equipment to be returned to 1st Signal Brigade's reserve assets. The switchboard operators were reassigned to other 43rd Signal Battalion companies where they relieved critical MOS 72C shortages.

(b) Forty personnel from the 40th Signal Battalion were attached to the 586th Signal Company for cable construction projects at Camp Radcliff. The team arrived 6 December 1969; cable construction was completed and the team departed on 21 January 1970.

(c) Company C consolidated its supply, ELM and motor PLL's. Two clerks are now able to maintain all three PLL's. TAERS management has improved as a result of the consolidation.

(4) Training:

(a) Forty-eight personnel of this battalion attended a total of seventeen specialized courses. The courses and number of personnel attending were:

COURSE	NUMBER ATTENDING
Cable Splicer	5
Telephone Installation and Repair	5
System Control	3
PCM Operator	1
AN/TRC-24 Operator	4
71H Refresher	3
1.5 - 10KW Generator	3
PLL Course	4
ICS-SEA Orientation	1
Audio Visual	5
Outside Plant	1
COMSEA Data Collection	3
KW-7	1
Subscriber Assistance Tng	1
Mode I, II, or V Subscribers Class	2
Driver Tng Instructor Class	5
Mode V Course	1

(b) Four deserving sergeants-E5 from the 278th Signal Company were chosen to develop their leadership skills at the 4th Infantry Division NCO Academy.

(c) One qualified individual from each company was sent to the defensive driving course presented by the 1st Signal Brigade Safety Office to obtain an instructors certificate. These instructors are presenting classes to all potential drivers on a regular basis as a licensing prerequisite.

(d) Personnel shortages which have been alleviated by OJT training during the last quarter include MOS 31E and 31N. The OJT program will continue as long as the need exists.

(e) During the months of November and December the ELM Shop received 3 ARVN personnel from the 660th ARVN Signal Battalion for OJT on teletype and test equipment. Training was conducted for a period of 24 days. The 660th ARVN Signal Battalion reported favorably on the results of the training. The OJT program will benefit the ARVN's maintenance program.

(f) During this reporting period the battalion experienced a large turn-over of personnel within the 31M and 32D MOS's. An extensive OJT program was set up to hasten the training and familiarization of new personnel with the equipment. Adequate lesson plans were already on hand and the training was well organized.

(5) Civic Action:

(a) The 43rd Signal Battalion Civic Action Program was more closely coordinated with the programs of other Pleiku area military units. The Civic Affairs Officer met monthly with civic action personnel of ten local Army and Air Force Units. A representative of each unit gave a brief resume of the unit's current civic action projects and problem areas. A discussion period followed each presentation. As a result of the discussion, the needs and assets of each unit became generally known and it was decided that units pool their efforts to more efficiently complete a project.

(b) Cooperation between the 43rd Signal Battalion and her sister battalion, the 660th ARVN Signal Battalion, has been extended into the area of office management. The units' ink duplicating and thermofax facilities have been found to be complementary. Work backlogs at one unit are alleviated by using the facilities of the other unit. Preparation of bilingual documents is facilitated by joint use of the Vietnamese and English language typewriters owned by the 660th and the 43rd, respectively.

(c) During the period, two enlisted men (PFC Laz and PFC Healy) taught English pronounciation in MINH-DUC Catholic School. These classes were for Vietnamese students in the 6th, 7th and freshman high school grades during the hours of 1400-1800 on Monday, Thursday, and Saturday.

(d) On 3 January 1970, the 278th Signal Company provided a power auger for the consolidated montagnard village of Plei Ho By. It was used to bore holes for the construction of the villagers' huts. The only problem encountered was that security had to be provided to accompany the power auger to and from the village.

(e) Twenty men from Company C enjoyed Christmas dinner in the homes of local nationals in the Kontum Area. Good relations were promoted by this activity and participants gained a better understanding of the customs of both nations.

(f) Toys, fruits, cookies, and food were donated by members of the battalion to Vietnamese children at two Christmas parties.

(6) Logistics:

(a) A shortage of 60KW generators was eliminated during the reporting period. Fifteen skid-mounted, diesel-powered, 60KW generators were issued to the battalion in January.

(b) The Tropo Hill complex received two used MRC-85 generator vans (four 150KW generators) on 22 November 1969 to replace two inoperative MRC-85's. These generators employed to supply power to four signal sites on Pleiku Tropo Hill, have been the source of many maintenance problems. The status of the four (4) 150KW generators is as follows:

Van 1: a) D/L - Rear Seal
b) D/L - Rear Seal

Van 2: a) Amber - Defective battery charging system
b) Green

(7) Maintenance:

(a) Increased emphasis on preventive maintenance procedures as outlined in the 43rd Signal Battalion SOP and applicable TM's has resulted in two months without a generator power outage at the Dragon Mountain Site.

(b) The HHD/A Company consolidated motor pool has experienced a shortage of trained automotive mechanics, with further losses expected in the next two months. The use of generator mechanics, cross-trained as automotive mechanics, was sufficient as long as experienced automotive mechanics were available to train them. This cross-training program has been hampered by the loss of trained automotive mechanics.

(c) On 18 January 1970, the 278th Signal Company underwent a 21st Signal Group Command Maintenance Management Inspection. The unit received an overall satisfactory rating.

(8) Communications - Operations:

(a) As of 31 January 1970 the 43rd Signal Battalion controlled the following:

302 Circuits
8 VHF systems
7 UHF systems
2 Microwave systems
4 Tropo systems
5 Teletype tone packs
2 RTT stations
1 MARS station

(b) During the reporting period there were 61 circuit activations and 31 circuit deactivations. Activations include 43 primary tandem circuits, 4 secondary dial trunks, and 4 secure voice circuits.

(c) During the quarter the following seven VHF test shots were attempted to improve the reliability of VHF communications:

TERMINALS	RADIO EQUIP	RESULTS
PKU to KTM	AN/GRC-50	NEGATIVE
PKN to KTM	AN/TRC-24	POSITIVE
PKN to TCN	AN/TRC-24	POSITIVE
PKU to KTM	AN/GRC-50	NEGATIVE
PKU to KTM	AN/TRC-24	POSITIVE
PKU to TCN	AN/TRC-24	POSITIVE
Arty Hill to KTM	High gain antenna	POSITIVE

(d) The intensive test shot program lead to the following changes in the 43rd Signal Battalion multi-channel communications network:

(1) The BBH61 system was changed from AN/TRC-24 radio equipment to AN/GRC-50 radio equipment and redesignated the BBW46 system. This change was accomplished to alleviate the shortage of AN/TRC-24 equipment at Pleiku and to allow the activation of another AN/TRC-24 system.

(2) A new system, BBH2F, was activated on 8 January 1970 to KTM utilizing Alpha band AN/TRC-24 radio equipment. At present, there are seven circuits on the system. This new system provides reliable communications between KTM and PKU with spare channels for alternate routing capabilities.

(3) The BBH24 system, relayed thru Artillery Hill to KTM was changed to a high gain antenna. The high gain antenna improved the reliability and quality of the system.

(4) On 7 January 1970, attached personnel from the 362nd Signal Company activated an AN/TRC-90 trospheric scatter system, BBT18, between Hon Cong Mountain and Landing Zone English to support the 173rd Airborne Brigade. All circuits which were on the AN/TRC-24, BBH3D system were cutover to the tropo system. The VHF system will remain as back-up for the BBT18.

(5) The BBW29 and BBW42 systems were placed on a deactivated stand-by position as back-up for the cable running from the Air Force DTE to Camp Holloway and the cable running from the Air Force DTE to Pleiku North, respectively. The systems are activated on Wednesday

of each week to check out the equipment. This helps to conserve the equipment and man-power needed on these systems. There still are personnel at the sites 24 hours a day ready to bring up the systems whenever required.

(e) The PKG Signal Site received a radio set AN/FRC-93 to provide a back-up communications system to CACOC should the existing VHF system go off the air. This allows for better coordination between distant ends for faster system restoration.

(f) Personnel from Company D, 40th Signal Battalion, attached to the 586th Signal Company, replaced the 04/200 pair cable (4700 feet) to Hon Cong Mountain on 6 December 1969. Installation of this cable has increased by 75% the number of pairs available from the dial central office to Hon Cong Mountain.

(g) Replacement of the An Khe 05/400 pair cable was completed on 28 December 1969. The old cable had deteriorated beyond repair and its replacement will provide sufficient spare pairs for the expected increase in number of subscribers on Camp Radcliff.

(h) On 21 December 1969, the installation of a new 1500 foot section of the Dragon Mountain 200 pair cable was completed. The replacement of this section eliminated several bad splicies and increased the number of useable pairs to 180. In addition, the cable has been reterminated in one wirehead. This retermination centralizes control and results in greater troubleshooting efficiency.

(i) The 278th Signal Company and attached 578th personnel rehabilitated the Camp Enari 05 cable which runs from the DTE to Division Artillery. The cable was relocated and a buried splice case was drained and resealed with composition "B" sealing tape. These actions eliminated the power hum on the cable and increased its reliability.

(j) A project was initiated on 3 January 1970 to raise all of the terminal cans on Camp Enari. This is being done to preclude the chance that the terminals will be submerged during monsoon seasons.

(k) During the cutover of the Pleiku Tandem Switch, personnel operating the microwave equipment experienced difficulty in aligning the channels. This was caused by improperly wired amplifier cards which were wired for the secondary trunk standards and not prepared under tandem requirements. This improper wiring produced a tone that

precluded microwave alignment. To alleviate this problem, all amplifier cards were rewired. The microwave personnel were thoroughly briefed on the characteristics of the new equipment in the dial exchange. The result was a smooth and efficient cutover.

(1) During the tandem cutover, the 278th Signal Company experienced two problems with linefinders. Numbers seven through ten on each linefinder within every hundred group were inoperative. In order to solve this problem, the straps from jacks A-16 and A-21 were removed from each linefinder circuit plate in all linefinder groups. The thousand ohm resistor in each linefinder was operating the E and R relay at sporadic intervals. This resulted in all subscribers having access to executive right of way. The E and R relays were adjusted and the problem was rectified.

II. Section 2. Lessons Learned: Commander's Observation, Evaluation, and Recommendations.

a. Personnel: Monthly Personnel Information Roster

(1) OBSERVATION: During the reporting period, a program was initiated by the Battalion Personnel Officer, which permitted company commanders to report their mission essential requirements in an annex to the Personnel Information Roster (PIR).

(2) EVALUATION: By using the information obtained from the annex regarding mission essential requirements, the Personnel Officer was able to adjust the personnel assignments within the battalion to provide better utilization of the personnel.

(3) RECOMMENDATION: Mission essential requirements are usually established by battalion or higher units on a one time basis as the Personnel Officer requires. This procedure should be amended to establish a constant reporting requirement on a monthly basis in conjunction with the PIR. This practice will assist the company commander in the performance of his mission and improve the reliability of information reported by company commanders.

b. Intelligence:

(1) Control of Local National Employees:

(a) OBSERVATION: Local nationals are being allowed to enter US installations although they do not have proper passes.

(b) EVALUATION: Local national employees occasionally absent themselves from work due to sickness or other reasons. They give their identification card to a relative or friend who presents it to the controller at the Labor Control Point. The controller gives the unauthorized person the pass assigned to the absent person and allows the local national to enter. Failure to positively identify local nationals with identification cards is a security hazard.

(c) RECOMMENDATION: Larger pictures should be used on Vietnamese ID cards to aid in identification. More stringent control measures must be applied at Labor Control Points.

(2) Defoliations:

(a) OBSERVATION. Units operating isolated signal sites possess a requirement for periodic defoliation of the defense perimeter.

(b) EVALUATION: In the Central Highlands, the time period starting in the latter part of November and lasting through January is particularly advantageous for the defoliation of defense areas by burning. During this period, the foliage is dry and in many cases, dead. This condition facilitates defoliation operations with minimum man-power and materials expended. Defoliation greatly improves site security.

(c) RECOMMENDATION: Units should take advantage of climatic conditions when considering defoliation of perimeter, especially those of small signal sites.

(3) Reaction Forces:

(a) OBSERVATION: Signal units should maintain a separate reaction force, even when units are enclosed by or are a part of a base with consolidated defense plans.

(b) EVALUATION: Requirements often arise which are limited only to the operations of the supporting 1st Signal Brigade units. Requirements such as the emergency movement of generators or emergency deployment of signal vans often will not or cannot be supported by the unit receiving the signal support.

(c) RECOMMENDATION: 1st Signal Brigade companies or signal detachments should maintain a reaction force capable of transporting materials and equipment, or supporting personnel on defense perimeters that are separated from the base camp. Equipment should be designated for this mission and personnel should know their duties on the force in order to react in the minimum amount of time.

(4) Damage to Wire Barriers by Fire:

(a) OBSERVATION: Defoliation of perimeters by burning causes barbed wire and concertina wire to become brittle and the concertina rolls to collapse.

(b) EVALUATION: Defoliation is essential to maintain a clear zone of fire and to deny enemy forces concealment near perimeters. Heat caused by burning damages the barrier wire requiring that it be replaced earlier than normal. Replacing perimeter wire is costly and time consuming. Often the wire is in short supply, therefore difficult to obtain.

(c) RECOMMENDATION: After tall grass and brush are initially cleared from perimeter wire barriers a chemical defoliant should be used to prevent the growth of new foliage.

c. Operations:

(1) Power Switchboxes:

(a) OBSERVATION: Tactical switchboxes which are taken from the PU-619 generator configuration are not capable of holding the load applied to them when used to power semi-permanent signal sites.

(b) EVALUATION: The 278th Signal Company had an extended system outage due to the use of tactical switchboxes and power distribution panels. They failed because of an increase in the connected load of the site. This is particularly evident in the Pleiku South Microwave Site which is the terminal for the 77UM2D and BBM12 systems. Originally, tactical switchboxes and power distribution panels were used to provide electrical distribution for several UHF and VHF systems. When these systems were replaced by microwave, the load was substantially increased. Two 60,000 BTU air conditioners and one 10,000 BTU air conditioner were also installed. This resulted in the original switchbox burning out.

(c) RECOMMENDATION: When planning and developing signal facilities, the electrical power distribution system should be installed to provide for future power increases. This will allow for expansion of the site without down time for rehabilitation and expansion of the power distribution system.

(2) Aerial Type Splice Cases:

(a) OBSERVATION: Aerial splice cases may be used in the installation of buried cable plants when buried splice cases are not available.

(b) EVALUATION: During the installation of buried cable plants, buried splice cases are often not available for use. Aerial splice cases may be used in the manhole configuration shown in inclosures 2 and 3. This design not only allows for the successful use of aerial splice cases, but also may be adapted to all splice cases used in a buried cable plant.

(c) RECOMMENDATION: Information should be published and distributed to all units maintaining or installing buried cable plants showing the configuration illustrated in inclosure 2 and 3. This technique provides easy access to the splice and allows the splice to be checked periodically for deterioration.

(3) Message Reject Rate:

(a) OBSERVATION: Increased supervision of message header tape preparation and installation of the new 2D program board lowered the message rejection rate for the UNIVAC 1004 AUTODIN Terminal.

(b) EVALUATION: The message reject rate for the Pleiku Army Communications Center's Mode I AUTODIN Terminal was considerably reduced when UNIVAC technical representatives replaced the old 2D program board with a new modified version. The reject rate was further lowered by insuring that message header tapes were accurate before they were fed into the terminal.

(c) RECOMMENDATION: Replacement of program boards should be considered for Mode I AUTODIN Terminals plagued with a high reject rate. Message header tape accuracy must constantly be stressed.

(4) Kleinschmidt Teletypewriter Equipment:

(a) OBSERVATION: All teletypewriter equipment made by Kleinschmidt Company has sealed oiler bearings installed which should be removed before bathing in solvent (Reference TM 11-5815-244-35, page 140, paragraph 107, subparagraph E).

(b) EVALUATION: It has been observed that inexperienced personnel are unaware of the above and unknowingly bathe a machine without removing the oiler bearings. This practice shortens the life of the bearings and increases frequency of repair.

(c) RECOMMENDATION: An experienced repairman should evaluate the necessity of bathing a machine in solvent. When he deems this necessary, he must inspect to see that the machine has been properly dismounted. In this manner, outage time and shop time will be reduced to a minimum.

(5) Moisture Damage to Multi-pair Cable:

(a) OBSERVATION: During rehabilitation of a multi-pair cable at Camp Radcliff it was noted that the cable was irreparable due to moisture damage extending some distance on both sides of a splice cover.

(b) EVALUATION: During initial installation of the cable, splice cover seals were not installed and the drain plug was not removed. Water seeped into the cable. Extensive damage over a period of two years required replacement of the cable.

(c) RECOMMENDATION: That final inspection be made by responsible persons prior to acceptance of a newly constructed cable to insure drain plugs are removed and seals are in place.

(6) Operation of Power Generators:

(a) OBSERVATION: Power outages caused by dirty fuel were reduced by utilizing the generators' primary fuel tank.

(b) EVALUATION: During the previous reporting period and the early part of this reporting period, the Dragon Mountain Signal Site experienced several power failures due to dirty diesel fuel clogging the injectors of the generators. Repeated efforts to solve this problem and command interest regarding the servicing of filter elements brought about little improvement. Upon the recommendation of the 21st Signal Group Generator Advisor, the signal site ceased running generators utilizing the auxiliary line from a 600-gallon pod and operated the units only from the set tank. Using this method with the generator operator using the 600-gallon pod and generator set tank on "Gas Station" type operation, there have been no power outages attributed to dirty fuel and clogged injectors for over two months.

(c) RECOMMENDATION: Signal sites running 15KW and above generators should operate the unit only from the set tank.

d. Organization: None

e. Training: Training Forecasting

(1) OBSERVATION: Battalion training administrators are receiving little advance notice of changes in allocations or course cancellations of United States Army Training Facility Courses.

(2) EVALUATION: Short notice changes make some USATF courses unpopular with company training sections. Usually a course change necessitates changing the travel orders, work schedule, guard and CQ duties of personnel involved.

(3) RECOMMENDATION: Battalion training sections should be notified of USATF course changes by telephone. Written notification should follow.

f. Logistics:

(1) Weapons Issue:

(a) OBSERVATION: Unit weapon maintenance capability has been lowered with the issue of a new model rifle.

(b) EVALUATION: During the reporting period all M-14 rifles in the battalion were replaced by M-16A1 rifles. Cleaning supplies peculiar to the M-16 series of rifles were in limited supply. Replacement parts were non-existant. A procedure should be set up through which units can requisition parts that experience has shown will be needed as PLL, prior to receiving new weapons. A unit maintenance kit containing all the necessary PLL items could be issued with each 100 weapons.

(c) RECOMMENDATION: A kit containing all PLL items necessary for performing unit maintenance should be assembled and issued with the bulk issue of a new series of rifles.

(2) Communications Center Supplies:

(a) OBSERVATION: Teletypewriter paper, tape, other bulk supplies and parts for cryptographic and teletype equipment are extremely slow in coming through the supply chain.

(b) EVALUATION: Normal requisitions for bulk supplies take at least four months to be filled. Requisitions for machine parts take at least two months to be received.

(c) RECOMMENDATION: That requisitions for bulk supplies be ordered monthly and the mission shop stock be kept at a substantial level to meet any emergency.

g. Communications:

(1) Use of High Gain Antennas:

(a) OBSERVATION: Noise and low signal level had been a constant problem on the BSH24 system between Kontum and Pleiku. By changing from the normal antenna and cable configuration used with AN/TRC-24, "B" band, to a CG-1339 cable and an AT-880 high gain antenna the signal to noise ratio was greatly improved.

(b) EVALUATION: Terrain features in the Kontum area makes the use of normal planning and equipment unreliable. Use of high gain antennas in part makes up for the loss in signal caused by the mountains surrounding Kontum.

(c) RECOMMENDATION: High gain antennas should be installed whenever possible in the Kontum area.

(2) Gold-Plated TD Contacts:

(a) OBSERVATION: The installation of gold-plated TD contacts on the FGC-25 teletype used in the Camp Enari Mode V AUTODIN Terminal substantially reduced the reject rate and increased the efficiency of the operation.

(b) EVALUATION: The tungsten contacts normally used in the AN/FGC-25 teletypewriter develop a dirty surface film after extended use. The film interrupts the flow of electricity through the contacts causing improper functioning of the machine. The gold contacts resist film formation.

(c) RECOMMENDATION: That gold contact assemblies be procured or locally manufactured by 1st Signal Brigade CSEMA - Engineers and distributed to all Mode V Terminals in the field.

(3) 2-Pair Cable (20AWG) FSN 61459587803:

(a) OBSERVATION: The installation of 2-pair cable FSN 61459587803 as the keying line for Mode V AUTODIN Terminal reduced average percent total peak distortion.

(b) EVALUATION: 2-pair cable was originally installed as a back-up keying line for the Mode V Terminal and upon operating with this cable it was observed that average total peak distortion between Camp Enari and Pleiku EE was reduced several percent. The original keying line was spiral 4 cable. It is felt that spiral 4 cable is not as compatible as 2-pair cable because of the frequency response of the spiral 4 cable. This is in comparsion to the 2-pair cable with the addition of cable hocks. Two pair cable may be run greater distances with no hocks or splices.

(c) RECOMMENDATION: That 2-pair cable be made readily available for all types of installation requiring low distortion levels and high traffic volume.

(4) Buried Cable in Unsecure Areas:

(a) OBSERVATION: Cable in unsecure areas, even when buried, is an unreliable means of communications.

SCCPV-NG-PK-C 11 February 1970

SUBJECT: Operational Report - Lessons Learned (43rd Signal Battalion) period ending 31 January 1970, RCS CSFOR-65 (R2)

(b) EVALUATION: The six-mile, two-pair buried cable to the 815th Engineer Battalion detachment at Wolly Bully, south of Kontum, is unreliable and in constant need of repair. At the time of installation it was realized that the required communications would be temporary in nature, i.e. only needed as long as the road between Pleiku and Tan Canh was being built. The entire length of the cable was installed in an unsecure area south of Kontum's outermost defensive perimeter. The cable has been repeatedly cut by suspected enemy personnel. Many man-hours have been expended in locating and splicing breaks in the cable. The splices have increased attenuation, resulting in marginal communications.

(c) RECOMMENDATION: In the future when communications are provided to units outside city defense, VHF radio and RWI systems should be used. This would result in savings of both man-hours and materials and would improve the quality of communications provided.

h. Material: None

i. Other: None

Humphrey J. Martin

3 Incl
as

HUMPHREY J. MARTIN
LTC, SigC
Commanding

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2- CINCUSARPAC, ATTN: GROP-DT, APO 96558
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1- CG, 1st Sig Bde, ATTN: SCCPV-OP, APO 96284
15- CO, 21st Sig Gp, ATTN: SCCPV-NG-OPT, APO 96240

SCCPV-NG (11 Feb 70) 1st Ind
SUBJECT: Operational Report - Lessons Learned (43rd Signal Battalion) period ending 31 January 1970, RCS CSFOR-65 (R2)

DA, HEADQUARTERS, 21ST SIGNAL GROUP, APO 96240, 27 February 1970

TO: SEE DISTRIBUTION

1. Subject report is forwarded IAW 1st Signal Brigade Supplement 1 to AR 525-15.

2. This headquarters has reviewed the basic report and concurs with the information contained therein with the following comments and/or exceptions:

a. Paragraph 1b(6) (b), page 7. It has been determined by the USAMECOM technical representative to 21st Signal Group that there is no maintenance facility in country with the capability of replacing defective seals on those generators. Steps will be taken to evacuate the deadlined generators, and to replace them with PA&E power or the new SF-60-MD generators organic to the battalion.

b. Paragraph 2a (3), page 11. Each battalion is required to prepare a PIR for all units under its command and submit copies to group headquarters prior to the tenth of each month. In addition, a monthly report is being initiated to be forwarded with the MOS Inventory Report, reflecting battalion MOS shortages based on mission essential requirements.

c. Paragraph 2e (3), page 15. It has been a standard practice of this headquarters to immediately notify battalions of course cancellations. Occasionally, a course is cancelled at a late date, and notification cannot be given as far in advance as would be desirable.

d. Paragraph 2f (1) (c), page 16. Future directives to group units in regard to exchanging weapons on a bulk basis will include guidance to insure that cleaning materials and repair parts are requisitioned in advance.

James P. Hattern
JAMES P. HATTERN
Colonel, SigC
Commanding

DISTRIBUTION: (1st Ind Only)

6 - CG, 1st Sig Bde, ATTN: SCCPV-OP. APO 96384
2 - ACS FOR, DA, Washington, D.C. 20310
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5 - CO, 43rd Sig Bn, APO 96318

SCCPV-OP-AD (11 Feb 70) 2d Ind
SUBJECT: Operational Report - Lessons Learned of Headquarters 43d Signal Battalion for Period Ending 31 January 1970, RCS CSFOR-65 (R2)

DA, HQ, 1st Signal Brigade (USASTRATCOM), APO 96384 13 March 1970

TO: Commanding General, United States Army, Vietnam, ATTN: AVHGC-DST, APO 96375

1. Subject report is forwarded in accordance with AR 525-15.

2. The following comments are made:

a. Reference item "Critical MOS Shortage", para 1b(1)(d), page 2: There are sufficient personnel with MOS 52B available to perform the duties of MOS 52D. MOS 63C is not considered a critical MOS by this headquarters.

b. Reference item "Logistics", para 1b(6), page 7:

(1) A request for assistance in maintaining and repairing the MRC-85 power vans was forwarded to 1st Log Command on 16 November 1969.

(2) 1st Log Command states that their Subordinate Support Commands have been requested to contact customer units and develop an effective program to support the MRC-85 power vans.

(3) Units that have the MRC-85 power vans should contact their direct support (D/S) units to ensure that the D/S units are complying with 1st Log Command Directives.

(4) Correspondence was forwarded to Regional Communications Group requesting status of action taken by direct support units to restore the MRC-85 Generators to operational condition. A reply has not yet been received.

c. Reference item "Aerial Type Splice Cases", para 2c(2), page 13: Although it is understood that this is an attempt to provide a suitable substitute it falls short of providing the necessary protection. CSEMA is presently publishing an LOI on cable construction which does not only demand double seal (buried) splice cases but requires additional protective measures. The gravel and bags that this plan relies on to prevent water seepage will not in reality provide that much extra protection. In addition, double seal splice cases are designed for the double sheath of buried cable, whereas aerial cases have no such provision. There can be no substitute for aggressive S-4 action to insure WECO type 9, 10, 11, 12 (direct burial) splices are available. If professional results are to be expected professional attitudes should be taken and this does not include the substitution of inferior materials, expecially when the correct materials are in the supply system.

SCCPV-OP-AD 13 March 1970

SUBJECT: Operational Report - Lessons Learned of Headquarters, 43d Signal Battalion for Period Ending 31 January 1970, RCS CSFOR-65 (R2)

d. Reference item "Moisture Damage to Multi-pair Cable", para 2c(5), page 14: Concur in principle. However, it is impractical to disassemble each splice case to insure proper installation during the final test and acceptance. The supervisory personnel within the cable construction units must establish procedures to insure that correct construction practices are followed.

e. Reference item "Training Forecasting", para 2e, page 15, and para 2e, page 19, 1st Indorsement: The policy of telephonic notification of units affected by changes in USATF schedules is one of long standing.

f. Reference item "Weapons Issue", page 2f(1), page 15, and para 2d, 1st Indorsement: The assembly of a repair parts kit would create additional stockage requirements within the supply system. Technical manuals have been developed which provide the using unit with a prescribed load allowance and the unit has been provided procedures for requesting these items in AR 735-35.

g. Reference item "Communications Center Supplies", para 2f(2), page 16: The provisions of AR 735-35 for requisition and receipt of supplies are adequate. Units must stock material based on the demand experience within the requirements generated. The property book officer of the unit may stock consumable items in substantial quantities to support any emergency. The supply system when properly utilized, will react to the requirements of the unit, however, the unit supply personnel must consider any order and ship time required to receive the supplies.

FOR THE COMMANDER:

O. V. BOMEBRAKE
Major, AGC
Adjutant General

CF:
Commanding General, US Army Strategic Communications Command, ATTN: SCC-OPS-RT, Fort Huachuca, Arizona 85613
Commanding Officer, 21st Signal Group, APO 96240
Commanding Officer, 43d Signal Battalion, APO 96318

AVHGC-DST (11 Feb 70) 3d Ind
SUBJECT: Operational Report - Lessons Learned (43rd Signal Battalion) period ending 31 January 1970, RCS CSFOR-65 (R2)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 25 MAR 1970

THRU: Commanding General, United States Army Strategic Communications Command-Pacific, APO 96557

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 January 1970 from Headquarters, 43rd Signal Battalion and concurs with the comments of indorsing headquarters.

2. Comments follow:

a. Reference item concerning "Control of Local National Employees", page 11, paragraph b(1); nonconcur. The problem is one of failure to check the VN identification card picture against the bearer, not the size of the picture. The unit has been advised that compliance with the provisions of paragraph 8b, USARV Regulation 190-20, coupled with proper briefing of gate guards as to their responsibilities would preclude the entrance of unauthorized personnel. No action by USARPAC or DA is recommended.

b. Reference item concerning "Unit Weapon Maintenance Capability", page 16, paragraph f(1) and paragraph 2d, 1st Indorsement; nonconcur. Concur with paragraph 2f of the 2d Indorsement in that this push-package would place an unnecessary burden on the supply system. Units are notified of new equipment conversions from one to two months in advance. The message this headquarters sends out tells the units to order their necessary PLL as prescribed by the appropriate Technical Manual. The BILL received with new equipment should satisfy the unit until the PLL is received. No action by USARPAC or DA is recommended.

FOR THE COMMANDER:

C. E. MICHELS
MAJ, AGC
Assistant Adjutant General

Cy furn:
1st Sig Bde
43rd Sig Bn

SCCP-OP3 (11 Feb 70) 4th Ind
SUBJECT: Operational Report - Lessons Learned (43d Signal Battalion) period ending 31 January 1970, RCS CSFOR-65 (R2)

Headquarters, United States Army Strategic Communications Command-Pacific, APO San Francisco 96557 30 APR 1970

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

1. Subject report is forwarded in accordance with AR 525-15.

2. This headquarters has reviewed subject report and offers the following comments:

a. Reference item concerning "Message Reject Rate," paragraph 2c(3), page 14; concur. The improved version of the UNIVAC 1004 program board is identified as the 2D3 Program. This version contains additional error detection features which prevent transmissions of messages containing errors. All USASTRATCOM-PAC operated UNIVAC 1004 terminals (except at locations where phase-out of the UNIVAC 1004 is imminent) have been updated with the 2D3 Program.

b. Concur with the remainder of the report as indorsed.

FOR THE COMMANDER:

William C. Weaver Col Sig C
Deputy Commander

FRANK C. MAHIN
COL, GS
Chief of Staff

CF:
CG, USARV, APO 96375 (wo incl)
CG, 1st Sig Bde (USASTRATCOM), APO 96384 (wo incl)
CO, 21st Sig Gp (USASTRATCOM), APO 96243 (wo incl)
CO, 43d Sig Bn (USASTRATCOM), APO 96318 (wo incl)

GPOP-DT (11 Feb 70) 5th Ind
SUBJECT: Operational Report of HQ, 43rd Signal Battalion for Period Ending 31 January 1970, RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 22 APR 70

THRU: Commanding General, US Army Strategic Communications Command, Fort Huachuca, Arizona 85613

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

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

L.M. OZAKI
CPT, AGC
Asst AG

CF:
DA, ACSFOR
CG, USASTRATCOM-PAC

SCC-PO (11 Feb 70) 6th Ind
SUBJECT: Operational Report of HQ, 43rd Signal Battalion for Period Ending 31 January 1970, RCS CSFOR-65 (R2)

HQ, USArmy Strategic Communications Command, Ft Huachuca, AZ 85613
29 APR 1970

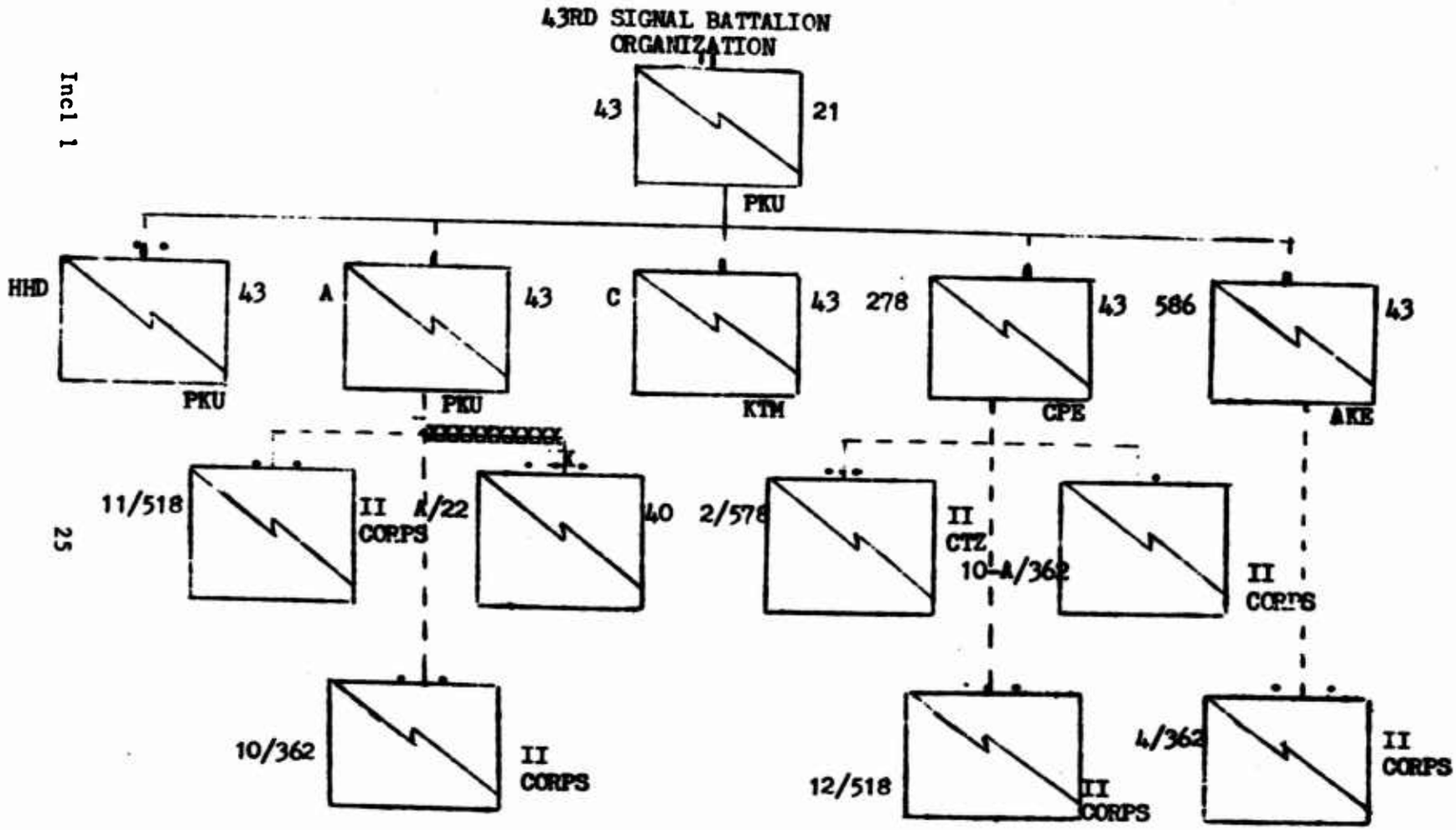
TO: Assistant Chief of Staff for Force Development, Department of the Army, Washington, D.C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER:

for W. O. POLSTON
Maj, AGC
Asst Adj Gen

Incl 1



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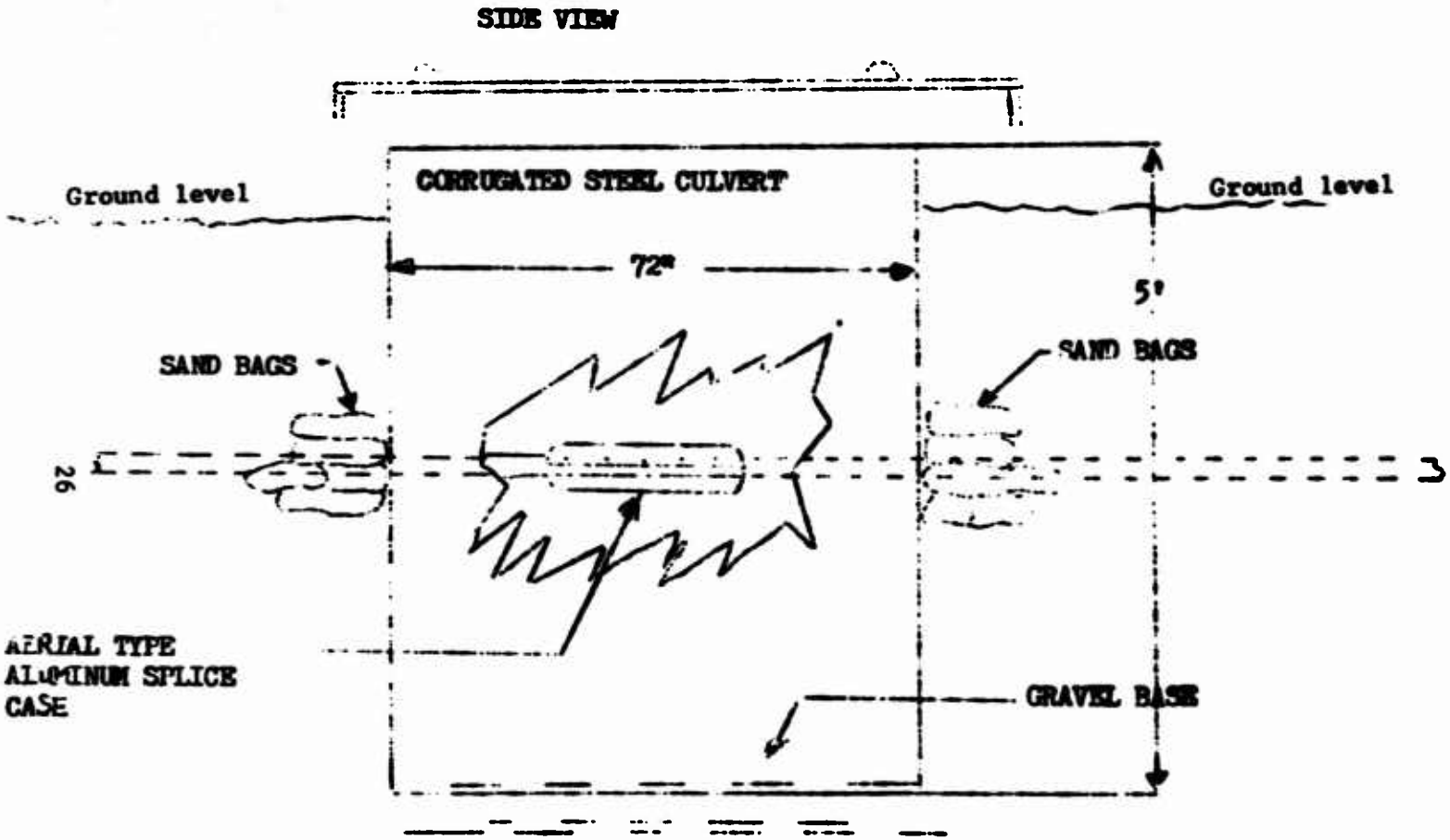
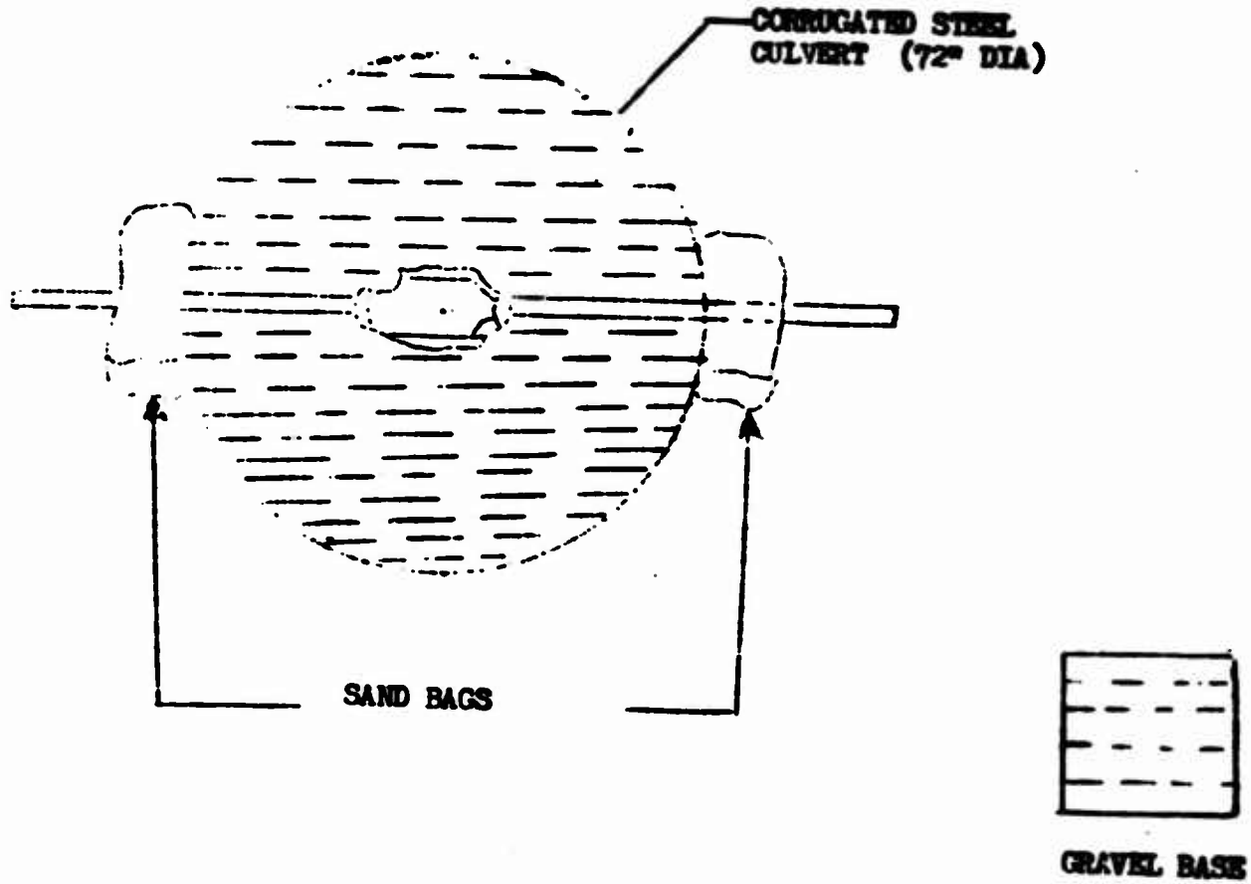

SIDE VIEW
Ground level
CORRUGATED STEEL CULVERT
Ground level
72"
5'
SAND BAGS
SAND BAGS
AERIAL TYPE
ALUMINUM SPLICE
CASE
GRAVEL BASE

AERIAL CABLE SPLICE USED IN A BURIED CONFIGURATION

TOP VIEW



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CO, 43d Signal Battalion

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