

AD-A081 376

ARMY PERSONNEL RESEARCH OFFICE WASHINGTON DC F/0 5/1
ENLISTED WOMEN IN ELECTRONICS JOBS--ADMINISTRATIVE FEASIBILITY, (U)
JUL 62 E F FUCHS, A KATZ
APRO-RESEARCH STUDY-62-4

UNCLASSIFIED

NL

1 OF 1
AD-A081 376

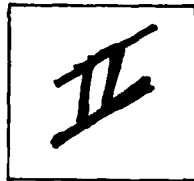


END
DATE
FILMED
4-80
DTIC

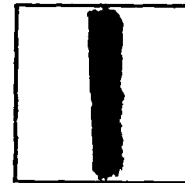
PHOTOGRAPH THIS SHEET

ADA081376

DTIC ACCESSION NUMBER



LEVEL



INVENTORY

ARI-Rsch Study 62-4

DOCUMENT IDENTIFICATION

Dtd. July 1962

DISTRIBUTION STATEMENT A

Approved for public release
Distribution Unlimited

DISTRIBUTION STATEMENT

ACCESSION FOR

NTIS GRA&I ☒

DTIC TAB ☐

UNANNOUNCED ☐

JUSTIFICATION

BY

DISTRIBUTION /

AVAILABILITY CODES

DIST

AVAIL AND/OR SPECIAL

A

23
C.F.

DISTRIBUTION STAMP

DTIC
ELECTE
MAR 5 1980
D

DATE ACCESSIONED

THIS DOCUMENT IS UNCLASSIFIED.
THE CONTAINING INFORMATION CONTAINED A
SIGNIFICANT NUMBER OF PAGES WHICH DO NOT
REPRODUCE LEGIBLY.

80 3 4 094

DATE RECEIVED IN DTIC

PHOTOGRAPH THIS SHEET AND RETURN TO DTIC-DDA-2

Release approved

Date: 28 Sept 1962

ADDITIONAL FILE

Office, S/A. Coordination and Publication
U.S. Army Personnel Research Office, USARO

Correction, p. 4

RESEARCH STUDY 62-4

Enlisted Women In Electronics Jobs-- Administrative Feasibility

ADA081376



U. S. ARMY
PERSONNEL
RESEARCH
OFFICE

DISTRIBUTION STATEMENT A

Approved for public release;
Distribution Unlimited

DISCLAIMER NOTICE

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

Army Project Number
OJ95-60-001

Attrition Reduction d-00

Research Study 62-4

ENLISTED WOMEN IN ELECTRONICS JOBS--ADMINISTRATIVE FEASIBILITY

Edmund F. Fuchs and Aaron Katz

Approved by

J. E. Uhlaner
Director, Research Laboratories

Hubert E. Brogden
Chief Scientist

July 1962

Research Studies are special reports to military management. They are usually prepared to meet requests for research results bearing on specific management problems. A limited distribution is made--primarily to the operating agencies directly involved.

BRIEF

ENLISTED WOMEN IN ELECTRONICS JOBS--ADMINISTRATIVE FEASIBILITY

REQUIREMENT:

The administrative feasibility of assigning WAC personnel in job areas not now open to women needed to be ascertained as a basis for planning experimental utilization of enlisted women in electronics maintenance jobs.

PROCEDURE:

Twenty enlisted women were assigned to the Fixed (Radio) Station Attendant Course (MOS 270.0) at the Signal School and subsequently to related on-job duty at five different installations. Administrative and situational factors attendant on such assignment were analyzed by the case study method as a means of identifying problems that might prove troublesome if larger numbers of women are assigned in jobs now filled by enlisted men.

FINDINGS:

1. Nineteen EW successfully completed the course. Two won honors in their class. Discharge due to pregnancy accounted for loss of one EW during training and two more after some time on the job.
2. All 19 EW proved capable of acceptable performance in a job appropriate to the training received.
3. No serious administrative obstacles to training or utilization of EW in the Electronics job area were noted.
4. Acceptance of EW in unaccustomed jobs by the chain of command is crucial to their successful performance and the feasibility of such a program.

UTILIZATION OF FINDINGS:

If WAC assignment is broadened to include job areas such as Electronics, the following procedures would facilitate initial steps in this direction:

1. Training instructors and administrative officers should be made aware of the importance of accepting the EW as serious trainees and job incumbents. This acceptance should be administrative policy, carrying over through any turnover of personnel.
2. A WAC officer, preferably the CO of the WAC detachment, should be designated to identify and deal with administrative and situational problems connected with assignment of job areas in which women have not previously been assigned.
3. A pre-course orientation program to familiarize EW with the tools and concepts basic to the training they are to receive--and with which most male students are already familiar--would facilitate early training progress.

ENLISTED WOMEN IN ELECTRONICS JOBS--ADMINISTRATIVE FEASIBILITY

SURVEY OBJECTIVE

In time of mobilization, the needs of the combat arms will probably draw off most of the more capable male personnel of the Army. The problem of how to maintain high caliber performance in the supporting MOS requires consideration of likely alternate resources. The Women's Army Corps (WAC), and particularly enlisted women (EW), constitute a promising resource.

The Chief of Research and Development and the Deputy Chief of Staff for Personnel have expressed the need for obtaining more definite information on the feasibility of employing women in various jobs in time of mobilization. A previous study conducted by the U. S. Army Personnel Research Office has identified electronics and electrical maintenance MOS as areas in which the potential of enlisted women should be studied (Sternberg, Greenberg, and Fuchs, 1958). These MOS would be of critical importance and do not make such physical demands as to rule out the use of women. A full-scale attack on this problem would call for research involving the training and utilization of a large number of EW in a variety of MOS in these occupational areas. It would be helpful, in planning for such research or for utilization of EW in these MOS, to know whether assignment of EW to such training and duty would introduce special administrative problems.

The purpose of this small-sample study was to identify situational and administrative problems involved in training and utilizing women in MOS 270.0, Fixed Station Attendant, selected as a representative MOS in this area. By focusing attention upon problems likely to be encountered in the training and assignment of EW to this MOS and by suggesting means of resolving these difficulties, results of this survey are relevant to planning for the maximal utilization of enlisted women in MOS in the electronics and electrical maintenance areas in the event of mobilization, although the findings would be similarly useful if a decision were made to use EW in the peacetime Army.

EXPERIMENTAL SITUATION

SAMPLE

Twenty enlisted women who met the requirements for training in MOS 270.0 and who volunteered for the training program were selected while in basic training. Major requirement was a score of 100 or higher in the Electronics (EL) Aptitude Area. These EW were quite young: 11 were 18 years old, 5 were 19, and the other 4 were 21, 22, 29, and 33.

One of the EW had two years of college education. In addition, 17 others were high school graduates. The remaining two, who had completed nine and ten years of schooling, met the educational requirement for enlistment in the WAC (high school graduation) by qualifying on the

General Educational Development Test. The mean General Technical Aptitude Area score for the women in this sample was 125.6, scores ranging from 98 to 144. The mean EL score was 109.25, scores ranging from 100 to 123.

COURSE CONTENT

The EW were sent to the Signal School, Fort Monmouth, New Jersey, for the fourteen-week course, 11-R-270.0, Fixed Station Radio Operation and Maintenance. This course prepares students for assuming the duties of Fixed Station Attendant, MOS 270.0. Job duties include making operating adjustments on fixed station radio equipment, maintaining the operating efficiency of circuits, and assisting in the installation and repair of fixed station electronic equipment. This course includes both theoretical and practical work and covers the fundamentals of electricity, basic radio, telegraph, carrier and antenna as well as radio receivers, radio transmitters, carrier equipment, single sideband receivers and transmitters, and fixed station integrated communications systems. The course was conducted in the normal manner, no changes being made in either content or method of instruction on account of the presence of EW.

The first group of four EW started training at the Signal School in January 1961 and the last EW completed training in September 1961. It had been planned to send four enlisted women to each of five classes, but because some of the EW chose not to take leave upon completion of basic training, and because two EW had their training at the Signal School interrupted by illness, EW were enrolled in nine different classes. The number of EW per class ranged from one to four. The total number of students per class approximated twenty.

JOB ASSIGNMENTS OF EW

The initial job assignments of the EW upon completion of training at Fort Monmouth are presented below:

<u>Organization and Installation</u>	<u>No. of EW</u>	<u>Utilization</u>
Midwest Relay Station, USACA, Fort Leavenworth, Kansas	8	On-the-job training for MOS 273.1, Fixed Station Facilities Controller
Third U. S. Army Signal Operations Unit (3003), Fort McPherson, Ga.	4	Fixed Station Attendant, MOS 270.0
Joint Communications Agency Fort Ritchie, Md.	3	On-the-job training for MOS 273.1, Fixed Station Facilities Controller
Communications Center, USACA, Pentagon	3	On-the-job training for MOS 273.1, Fixed Station Facilities Controller
U. S. Army Signal School Fort Monmouth, New Jersey	1	Evaluation and training in MOS 271.1, Fixed Station Receiver Repairman

SURVEY METHOD

The enlisted women were studied by case study technique while in training and for a period of six months while in their job assignments. To obtain an indication of the types of management problem which would have to be confronted in utilizing women in these technical specialties, problem areas were sought both in the school department or operating unit to which the EW were assigned and in the WAC detachment in which they were quartered. Problems arising from use of EW rather than EM were sought with respect to discipline, housing, transportation, promotability, etc. During the training period, interviews were conducted with the EW trainees and with their instructors as well as with administrative officers both in the Signal School and in the WAC detachment. Upon completion of training, interviews were conducted with the enlisted women, their supervisors and associates, male and female, in their job assignments, and with administrative officers both in the operating unit and in the WAC detachment.

SURVEY FINDINGS

Case studies on the training and utilization of the 20 enlisted women are reported in the Appendix to this Research Study. Since the sample was small, proportions for given results are not considered stable, but the general picture should be useful. In summary, what the young women were able to do in this tryout is very favorable. A sizable number of minor problems were revealed. The striking feature was the tendency for the reported suitability of the EW for assignment in the Electronics area to vary more with time and place than with individuals.

Findings concerning training at the Signal School were particularly favorable to the utilization of EW in selected Electronics jobs. Not one of the EW failed the course or was recycled to repeat any portion of the program. Further, two of the EW were the honor graduates of their respective classes. Since the EW constituted a small minority of the classes, these two represented more than a pro rata share of the honors. On the other hand, presence of women students presented some problems to both the men students and the instructors. Some of these problems appeared to be associated with the fact that only one or two women were in each class. The EW also ran into problems involving work clothing, transportation, and suitable rooms in which to study.

Followup to the later working situation presented a more variable picture. At two of the five locations, the utilization picture was wholly favorable. Six of the EW at these installations were highly regarded. Only one was considered poor for the job. At two other locations, a change was noted from the earlier to the later followup. At the time of the first visit to both installations, the EW were considered to be working out well, except for one who was considered poor on the job. In both locations, a change in the supervisory or command personnel had occurred during the period between the two visits. On the second visit to one location, supervisors reported the work performance of all EW as

relatively poor. At the other installation, the picture was complicated by reorganization of the work force and problems of authorized spaces by MOS. The one EW assigned to duty at the signal school completed the additional training satisfactorily. Minor problems involving such matters as transportation, work clothing, and off-duty facilities were noted at all installations.

A special problem in personnel planning for utilization of EW was evident in the rate of early discharge among this group of women. Of the 20 EW who started this experiment, three were discharged during the study because of pregnancy (one was discharged before completing the school course, the other two after some time on the job). Several others had ~~a~~^{also} married and apparently would be eligible for early discharge under current regulations. While the numbers reported do not necessarily represent stable proportions, since the sample was very small, the problem should be considered.

CONCLUSIONS

The conclusion appears reasonable that no serious administrative or situational factors preclude operational assignment of EW to electronics MOS. An experimental program of limited duration, affecting relatively few individuals, presents an atypical challenge to supervisors and administrators. If they can ride out a relatively short time period, the problem disappears. In contrast, a permanent program requires more than stop-gap solutions to administrative and situational problems. A permanent solution could probably be found fairly easily to problems such as those involving clothing and transportation and even local support for the program. Even the special attrition factors affecting EW could probably be handled by personnel management planners as soon as sufficient numbers of EW had gotten into a program to establish a stable statistical base. However, on introduction of any such program, it would be desirable to assign to an appropriate officer responsibility for identifying and attempting to resolve situational and administrative problems as they occur, so that the program would begin to operate efficiently as quickly as possible.

Findings of this study do suggest several administrative and situational factors which might affect an experimental study of EW assigned in a new job area such as Electronics. Although most EW could be expected to handle the training and job requirements, the program should be monitored to assure that administrative and situational factors do not interfere with opportunity for the EW to demonstrate their ability.

Some specific circumstances which should be considered for such an experimental program are as follows:

1. In planning input to the program, account should be taken of probable attrition due to marriage and pregnancy. Our study did not find the anticipated higher attrition in training for the EW, but did find attrition due to marriage and pregnancy. The rates found in this small sample should not be considered stable or representative, but merely as alerting to a possible problem.

2. To facilitate selection of personnel for the program, any information available concerning the nature of the training program, the duties and working conditions on the job, and projected tenure and promotability should be made available to the Classification and Assignment Officer at the WAC Center at Ft McClellan and counterpart personnel at any other installations at which EW will be selected for the program.

3. The commanding officer of the WAC detachment at each of the training and operational locations to which EW will be experimentally assigned should be asked to help identify and solve problems which the EW encounter. This officer is the one to whom EW would turn for help. Also, key personnel of the installation would be willing to listen to the WAC CO as a responsible spokesman for the special problems of enlisted women. She would be especially able to sort out the problems presented by inexperienced EW into those which are a routine part of enlisted life and those which merit serious consideration as special problem areas.

4. An attempt should be made to assure assignment of two or more EW together to a training program or operating unit. Although it had been planned in the present study to assign groups of four, unexpected developments broke these up into smaller groups. Some of the problems encountered were probably made more acute when a single EW was in a class or arrived separately on assignment to an operating unit.

5. Special pains should be taken to consider elements in the training situation or the job situation which might be affected by differences in the prior experiences of young women as compared to those of young men. Many young women may not have had an opportunity to pick up elementary information about names and uses of basic hand tools, about elementary factors of electrical circuits, and the like. Young women with appropriate aptitudes can pick up this information in a few hours if given the training. Yet lack of this information appears to be a significant obstacle to their being able to progress properly in some elements of electronics training. The additional training would probably also be useful in a regular program of assignment of EW to mechanical MOS.

6. Finally, but perhaps most important for an experimental program, acceptance of and support for the experiment on the part of supervisory personnel and the chain of command are of critical significance. Effective performance on the part of the EW is dependent upon their feeling accepted. Their performance cannot be properly evaluated unless the supervisor and his superiors are wholeheartedly in favor of the program objectives. Personnel in policy making activities at Department of Army level would be likely to see the overall advantages and to support the experimental program. The working level personnel in the training course and in the using organization need to be made aware of the benefits to be gained from a proper evaluation of the experimental program, and of the acceptance of the program by their superiors. Not only is the wholehearted cooperation of operating personnel essential, but information about the program should be so disseminated that normal turnover of operating personnel will not cause a breakdown in communication and replacements will be aware of the need to support the experimental program. This factor will also be important in the initial stages of a regular operating program for utilization of EW in selected MOS.

REFERENCE

Sternberg, J., Greenberg, F. S., and Fuchs, E. F. Identifying Army jobs suitable for WAC assignment. Research Study 58-3. U. S. Army Personnel Research Office. August 1958.

APPENDIX

ANALYSIS OF CASE STUDIES

TRAINING PERIOD

SCHOOL SITUATION

When interviewed, all 19 EW expressed great interest in pursuing this field of study. In many cases, interest was backed up by a willingness to put in long hours of study. Those EW who had had little or no previous exposure to physical science or mathematics courses had to put in long periods of study in order to grasp the theoretical material covered during the early weeks of the course. Further, two EW had been out of school more than ten years, a third had been out of school five years. Some of the EW felt that new material had been presented to them at too fast a pace. Once past the first four weeks, emphasis in the course turned to working with equipment, an activity which most EW found to be easier and more enjoyable. Eco, EW reported that through working with equipment they were able to achieve greater understanding of the theoretical material. To the instructors the material appeared to be no more difficult for the EW than for the EM.

The first group of EW arriving at the Signal School impressed instructor and administrative personnel as being very conscious of the fact that they were the first women to be enrolled at this school in a course of this kind. Not only did they seem to be concerned with the impression they were creating as to what women could learn, but they also wanted to demonstrate that women were serious about receiving technical training. The seriousness with which the EW pursued their training was evident to the instructors. The EW asked probing questions. In contrast with the general run of EM in these classes, they were not willing to accept the word of their instructors at face value. Many instructors felt that a competitive spirit was introduced into the classroom by including women as well as men. Several EW expressed an interest in study beyond the scope covered by the MGS 270 course.

Reports from the EW, generally supported by reports from their instructors, indicated that a good working relationship existed between the EW and EM in the course. The EW stated that EW and EM often assisted each other, either in class when working on equipment or in discussions during class breaks. Nevertheless, there were occasions when an instructor found it necessary to take measures to prevent EW and EM from socializing in the classroom and neglecting their work. These incidents involved only a few of the EW, and were handled without interfering with classwork.

A few instructors who favored classes of one sex only felt that having male and female students in the same classroom distracted some of the students from the training that was being given. Most instructors, however, favored mixed classes and were of the opinion that the level of

performance improved when the class consisted of both male and female students. It would seem that this factor outweighed concern over any distraction which might occur from presence of both EM and EW in a classroom. One instructor was of the opinion that if the proportion of male-female students assigned to each class was more nearly equalized, the possibility that any one EW would receive too much attention would be decreased. A few EW indicated that they would have been more comfortable had there been more women in their classes.

Concern with the quality of EW input was expressed not only by instructors and administrative personnel but by the EW themselves. A few EW proposed that, in future programs of this nature, EW be carefully screened to assure that serious-minded women only are admitted.

Of the 19 EW who completed training for MOS 270.0, three EW married during the fourteen-week training period at Fort Monmouth. In accordance with AR 635-210, they were eligible for early discharge from the service. Two of these EW married EM who were students in the same classes. The third EW married an EM who was an instructor in another course at the Signal School.

ADMINISTRATIVE SITUATION

Transportation provisions. On early visits of the research psychologist to Fort Monmouth, EW reported that no provisions had been made to transport them to and from the Signal School, which is located approximately a mile from the WAC Detachment. At a subsequent visit to Fort Monmouth, the research psychologist was informed that inasmuch as bus transportation was available on post for use by the EW, no action in this matter was possible. From the lack of use of the bus facilities of the post it would seem that the EW were not aware of the bus schedule or that the schedule did not coincide with their schedule. A transportation schedule suitable to their needs would have relieved the pressure felt by many EW in the mornings when they had to take care of assigned detail. Lack of transportation inflicted more of a hardship on EW in the first two classes than it did on those in later classes principally because a greater proportion of the training for the earlier classes took place during the winter months when the weather was more inclement.

Clothing regulations. When the first four EW arrived at Fort Monmouth, they learned they needed to wear fatigues while working on equipment at the Signal School. Fatigues were organizational equipment and none were available in stock at Fort Monmouth to meet the needs of these EW. Since the need for fatigues was immediate, the four EW went ahead and purchased fatigues at their own expense. Inasmuch as the fatigues were still not available when the second four EW arrived at Fort Monmouth, the WAC Detachment had requested permission from the Department of the Army for EW to wear heavy khaki fatigues on a monthly basis until the authorized fatigues arrived. This request was granted and heavy khaki fatigues were distributed to EW starting with the second group of EW. About 1 May 1961 the authorized green fatigues became available for all EW in training for MOS 270.0. However, on the visit

of the research psychologist to Fort Monmouth late in May 1961, the EW complained that with the warmer weather the wearing of green fatigues while working on equipment was becoming increasingly uncomfortable. Whereas EM could remove their shirts while at work, this solution was not available to EW. The EW requested permission of the WAC Detachment to wear their exercise suits while in training at the Signal School. In discussing this situation with the CO and 1st Sgt of the WAC Detachment, the research psychologist was informed that AR 670-30 forbade use of the exercise suit outside of the company area. When apprised of this situation, ODWAC took steps to have a request sent through channels for permission for the EW to wear the lighter weight exercise suits while undergoing training for MOS 270.0 at the Signal School. This request was granted.

Study facilities. A small room adjoining the dayroom in the WAC Detachment had been set aside as a study room for the EW. From the dissatisfaction expressed with this room by EW in the first class (noise, discomfort, etc.) and from the utilization by these EW and those in later classes of facilities such as the cubicles in which the EW slept, the dayroom, and the service club, in preference to the study room, it would seem that the EW found other facilities to be more suitable. Apparently EW in the earlier classes had not been made aware of post library facilities--or did not make much use of them--despite the fact that they are a short distance from the WAC Detachment.

Although these problems of transportation, clothing, and study room seem minor, they undoubtedly had impact on these students. Some such problems would be resolved more readily with larger groups of EW involved as students. It seems clear that in any plan for putting EW into new training programs, some provision should be made to check up on administrative problems so that the students will have every opportunity to assimilate the training.

EW ASSIGNED TO MIDWEST RELAY STATION, FORT LEAVENWORTH, KANSAS

The first four EW to complete training for MOS 270.0 at the Signal School were assigned to the Midwest Relay Station in April 1961. Four additional EW graduates were assigned to the Midwest Relay Station during September 1961.

On the first visit of the research psychologist to the Midwest Relay Station in June 1961, he learned that the job training planned for the EW was in MOS 273.1, Fixed Station Facilities Controller. It might have been more desirable or more logical to have given the EW experience at receiver and transmitter sites prior to assigning them for on-the-job training in MOS 273.1. Facilities controllers give orders to or directions to site personnel and evaluate quality of performance of site equipment. Controllers without direct receiver and/or transmitter experience were said to be handicapped and the opinion was expressed that it would take longer for the EW to become fully qualified Facilities Controllers without this prior experience. Administrative personnel

explained that there were a number of situational factors which prevented the EW from obtaining the desired experience at Midwest Relay Station facilities. Midwest Relay Station is not in the radio communications business yet. There were no MOS spaces for the EW. Also, transmitter and receiver sites were in isolated locations undesirable for EW location.

In light of these considerations, the EW were assigned to work as cryptography operators. The cryptography equipment (land lines) were an integral part of the Facilities Control Unit. The EW made daily changes in cards or rotors on the cryptography equipment. When a circuit went bad, the operator would request the trick chief to make a patch on the control board to pick up the circuit on a spare piece of equipment. The EW would be required to record what they found when running up a circuit or putting it back into traffic. The EW were required to watch the meters and lights on the equipment to be sure that the equipment was operating properly. The EW cleaned and lubricated the equipment before making change of rotor. Aside from operating the cryptography equipment, the EW had been given some explanation of how the control board worked, some instruction in making patches and had obtained some experience in making patches.

At the time of the first visit of the research psychologist to Fort Leavenworth in June 1961, the EW had been working on the job for four to five weeks. They had been prevented from starting sooner by need to wait until they had received their security clearances. In addition, one week had been devoted to orientation on operating procedures, equipment, and security requirements. The orientation was a combination of classroom lectures using visual aids, supplemented by tours of the station to equipment in operation. Administrative personnel, supervisors, and co-workers of the EW were well satisfied with the performance of the EW. As a matter of fact, they were somewhat surprised at their interest in radio and their ability to pick the work up. One administrative officer mentioned that the only limitations to the utilization of EW were that they could not be assigned to guard duty nor to heavy work such as lugging material off trucks. Incidentally, the heavy lifting of equipment at work was accomplished by male personnel.

The EW worked on shifts around the clock. The EW in MOS 270.0 were not the only EW working at the Midwest Relay Station. Transportation between the WAC Detachment and the Relay Station for EW at midnight was provided by the Military Police. The WAC Detachment is about a five-minute walk from the Midwest Relay Station.

The Commanding Officer of the WAC Detachment reported that the EW were of a high caliber and that they did not create any problems. The EW themselves were well satisfied with their quarters and the treatment they received at the detachment. Several took part in team sports of the Detachment. Off-post activities were limited, particularly when contrasted with what had been available in the Fort Monmouth area.

From discussions held in June 1961 with personnel at the Midwest Relay Station and with the EW themselves, it was the general impression

that the EW in MOS 270.0 would work into MOS 273.1 positions within a few months. The EW were excess to the TD, there being no slots for personnel in MOS 270.0.

On his second visit, in February 1962 the research psychologist learned that only six of the eight EW assigned to the Midwest Relay Station were still at the installation. One of the original four assigned to this facility had married, had become pregnant, and had been discharged from the service. In addition, one of the second four assigned to this station, who had married while at the Signal School, was found to be pregnant shortly after her arrival at Midwest Relay Station and also had been discharged from the service.

Between the visits of the research psychologist in June 1961 and February 1962, there had been changes in several of the key administrative personnel at the Midwest Relay Station. The company commander, the executive officer, and chief of operations division were all new to the organization. There was nothing in writing at the Midwest Relay Station to indicate to the new members of the organization what was expected of this installation insofar as the EW in the survey were concerned. If there was information in the personnel records of the EW that they were participating in a special study, it was not known to the newly assigned officers. (The personnel records are maintained at USACA headquarters in Fort Myer, Virginia.)

At the end of calendar year 1961, the Facilities Control Unit in which the six EW had been working was split into two sections, the Facilities Control Section and the Cryptography Section. Since the principal duties of the EW involved the operation of cryptography equipment, the EW were assigned to the Cryptography Section. This job calls for MOS 723, Communications Center Specialist. On 28 January 1962, one of the first four EW to arrive at Midwest Relay Station was transferred to the Facilities Control Section to fill a TD vacancy as Facilities Controller. The remaining five EW trained for MOS 270.0 were still working in the Cryptography Section, performing a job in which there is a shortage of personnel. These EW, all E-3's, would not be promotable until they filled a TD slot. They could fill one in the Cryptography Section with their present MOS. All TD slots in the Facilities Control Section were filled. There was no way of knowing when there would be vacancies in slots which the EW could fill, or when sufficient personnel would be assigned to the Cryptography Section to release these EW from the jobs.

By February 1962, the morale of the EW had been affected adversely. The effect had been particularly bad on the two EW who were in the original group of four sent to Midwest Relay Station, and who were still working in the Cryptography Section. One EW stated that if she was not promoted and failed to get into radio work, she would not re-enlist. When interviewed in February 1962, she had eight months to complete her two-year commitment. The second EW also was ready to quit. She stated that if things did not improve, she intended to take a "short" discharge at the end of two years so that she could re-enlist for some other

specialty. This EW had requested transfer out of the Signal Corps to the WAC Center where she would like to get experience as cadre in preparation for applying for Officer Candidate School. Her request for transfer had been denied because she was serving in a monitored MOS and the duties she was performing were critical to the organization. It was the intention of Midwest Relay Station to continue to promote EW to MOS 273 as TD vacancies appeared and EW continue to be fully qualified for this MOS.

Despite their low morale, both these EW were doing exceptionally well in their jobs as cryptography operators. Each reported that she had picked up a great deal about the work of Facilities Controller on her own initiative. One EW indicated that, on her own time, she learned QSY (changing transmission frequency), the way the radio operates, details of the patch board, and knowledge of test equipment. The other EW reported that she had learned about the patch board on her own.

The EW who had been transferred to the Facilities Control Section reported that she was spending about half of her time doing clerical work. No personnel were assigned to Facilities Control Section for this purpose. In order for this work to get done, it was a question of either utilizing one of the persons regularly assigned as a Facilities Controller to do the clerical work or for one of the supervisors to take care of it himself.

EW ASSIGNED TO JOINT COMMUNICATIONS AGENCY, FORT RITCHIE, MD.

In August 1961 a visit was made to the Joint Communications Agency, Fort Ritchie, where three of the EW trained in MOS 270.0 had been assigned. These EW had completed training at the Signal School in June 1961. They were receiving on-the-job training for MOS 273.1. The EW were being taught trouble shooting procedures, mostly involving land lines. Most of the work involved making patches on the control boards. Two of the three EW were progressing very nicely in their training and were getting along well with their peers and supervisors. The third EW, it was reported, did not seem to be interested in her duties, made very little effort to learn, had to be watched to be certain that she attended to her duties. This EW had married an EM in her class while at the Signal School. At graduation, her husband had been assigned overseas. Promotion of this EW to PFC was held up by the Commanding Officer of the WAC Detachment because of the need to keep after her to attend to her details. It was reported, however, that she had shown some improvement in this respect.

The EW at this installation reported their quarters to be satisfactory. The regular bus transportation provided for other military personnel was taking care of getting these EW to and from their jobs. Off post facilities at Fort Ritchie were limited and a car was needed to get around.

In December 1961, it was decided to retrain the problem EW in MOS 710, Clerk. Joint Communications Agency had tried to utilize such corrective measures as changing the shift of this EW and counseling, but the measures were found to be ineffective.

On 19 February 1962, in a phone call to the Chief, Facilities Control Branch, JGA, it was learned that the two EW in MOS 270.0 had worked out so well that their MOS had been changed to MOS 273.1, Facilities Controller, and that two weeks prior to the phone call the two EW had been promoted to E-4.

EW ASSIGNED TO THIRD U. S. ARMY SIGNAL OPERATIONS UNIT (3003),
FORT McPHERSON, GA.

The four EW assigned to the Third U. S. Army Signal Operations Unit (3003), arrived at Fort McPherson 3 August 1961. Since that date they have been working as Fixed Station Attendants at the transmitter site. The EW were put on the day shift for a period of two weeks to familiarize them with their job duties. When it was certain that they were capable of assuming their duties, three EW were placed on a shift by themselves. The shifts rotate around the clock. Some of the considerations in assigning three EW to a single shift were transportation, facilities at the site, and preferences of the EW involved. The fourth EW, who married a fellow student while at the Signal School, was placed on a shift with her husband, who also holds MOS 270.0. The husband of this EW is a former Marine, who had had experience in electronics while serving in the Marine Corps.

Duties of the Fixed Station Attendant are to tune and operate the transmitter equipment. They involve such activities as checking tubes, changing frequencies, putting a substitute piece of equipment into operation. One of the three EW was selected to act as supervisor of the others on her shift since from a practical point of view she seemed to have a better grasp of the situation. The staff at the transmitter site is well satisfied with the performance of these EW. They are willing to learn and are very conscientious.

There are no duties normally assigned to Fixed Station Attendants which the EW are not performing. Because the station does not have construction personnel, EM are called upon to dig ditches and to carry supplies. That there initially was some resentment against the EW was brought out by some complaints regarding these details. To balance things out, EW were assigned some other extra details at the site. This situation seemed to have been smoothed out.

No bus transportation to the transmitter site was available. At the time of visit by the research psychologist, lack of transportation had not created a problem because one of the three EW who work together has a car and takes the others to work. She is not reimbursed by the Army for performing this service. Lack of transportation could create a problem if the three EW were to be split up, a possibility of concern to the NCOIC. Should the problem arise, the NCOIC was requested by the research psychologist to take this matter up with the CO of the WAC Detachment, who was told of arrangements made at the Midwest Relay Station for the Military Police to furnish the necessary transportation. The married couple live off post, a distance of five blocks from the transmitter site.

The stockade is located not far from the transmitter site. The transmitter site, however, is completely secured from the inside. That there is concern for the safety of the EW is evidenced from a report of one EW that MP's circulated around the area and duty officers called to make certain that everything was all right.

The EW informed the research psychologist that they had asked permission to wear fatigues at work. The CO of the WAC Detachment stated that she had already looked into the request and that EW would be permitted to wear fatigues at work, but that they would have to change into fatigues at the transmitter site. The EW were not permitted to wear fatigues around the post, which is the 3d Army Headquarters.

On 19 February 1962, a phone call was made to the NCOIC at the transmitter site. He stated that the four EW were getting along very well in their jobs as Fixed Station Attendants. There were no problems at all insofar as these EW were concerned.

EW ASSIGNED TO THE COMMUNICATIONS CENTER, USACA,
THE PENTAGON, WASHINGTON, D. C.

Three EW assigned to the Communications Center, U. S. Army Communications Agency, the Pentagon, arrived during the last week of August 1961. They were given on-the-job training for MOS 273.1, Facilities Controller. In mid-October 1961, interviews were conducted with the EW, their supervisors, and peers, as well as with the Commanding Officer of the Communications Center. All were very favorably impressed with the progress made thus far by one of the EW, and moderately impressed by the progress of a second EW. The first EW was extremely enthusiastic about her job, did not care what shift she worked on and was thinking of re-enlisting. She reported that she had applied to take a Radio-TV correspondence course from the Signal School and that an NCO had offered her assistance with mathematics, an area in which she felt rather weak.

These two EW did not hesitate to ask questions to clarify anything they did not understand, nor were they reluctant to answer phone calls and help out as much as they could. They were not hesitant about asking to have their work checked to be certain that it had been accomplished correctly. A third EW, in contrast, seemed to be overwhelmed by the activity of the station. She did not ask questions, and it was difficult to get her to say whether she had understood explanations given her. She was reluctant to answer phone calls. When persuaded to do so, she could not recall what the message was about.

On 19 February 1962, a phone call was made to the Communications Center to obtain up-to-date information on the progress of the EW. In the interim, there had been a change in commanding officer. Conversation was held with the new CO. He checked with the sergeant in charge and reported that the EW who had previously been reported as the best of the three was only fair, and would never make a fully qualified controller. Mechanically, he said, she was all right, but she lacked interest,

knowledge, and appreciation of the requirements of the job. He stated that she had no desire for deep-rooted knowledge. He reported that she was also having some personality clashes; she was getting into people's hair.

With respect to the second EW, the sergeant had no hopes that she would ever make the grade of Facilities Controller. He further commented to the effect that personnel needed more training and experience before being placed in MOS 273 than these EW had. The report on these two EW contrasted markedly with the favorable impression of their progress reported four months earlier. Too, there had been no indications that the EW were having any difficulties in getting along with other personnel in Facilities Control.

The third EW was still working as an overseas switchboard operator. The opinion of the sergeant was that she is a smart girl but that she couldn't grasp the board. She still made errors despite the fact that she had been placed on a shift during which traffic is low.

EW ASSIGNED TO SIGNAL SCHOOL, FORT MONMOUTH, NEW JERSEY

Upon completion of the MOS 270.0 course in August 1961, one EW was assigned to the Signal School for evaluation and training in MOS 271.1, Fixed Station Receiver Repairman. This EW attended most of the classes for MOS 271.1 and assisted the supervisory instructor of this course with clerical work. The grades of this EW ranged from very satisfactory to excellent. She had taken all of the written tests, but only two of the practical tests.

This EW would have preferred to be assigned to the field along with some of the EW who had completed the MOS 270.0 course rather than at the Signal School. She seemed to miss the support of the other EW. The two instructors in MOS 271.1 who were interviewed reported that the EW were greatly distracted by this EW and that there was always conversation going on around her unrelated to work. These instructors reported that as far as theory was concerned, she did well. She was reported to do a fine job of adjusting or tuning equipment but was not good at maintenance.

On 19 February 1962 in a phone conversation with the supervisory instructor of the Receiver Repair course, it was learned that this EW had met the academic requirements for MOS 271.1 and that decision with respect to awarding this MOS to her was in the hands of Radio Division of the Department of Specialists Training at the Signal School. The supervisory instructor had several reservations as to her utilization in this MOS. They were her immaturity, her inability to do heavy lifting, and the fact that she does everything by rote memory. He stated that she does not think like a man. He questioned whether she would be able to stand the gaff in the field. On 5 March 1962, this EW was awarded MOS 271.1 and assigned to the Signal School.