DOCUMENT RESUME

04065 - [B3054323]

[Use of Simulators for Tank Crew Training]. FPCD-78-3; B-175773. November 1, 1977. 3 pp.

Report to Secretary, Department of Defense; by H. L. Krieger, Director, Federal Personnel and Compensation Div.

Issue Area: Personnel Management and Compensation (300).
Contact: Federal Personnel and Compensation Div.
Budget Function: National Defense: Department of Defense - Military (except procurement & contracts) (051).
Organization Concerned: Department of the Army.
Congressional Relevance: House Committee on Armed Services; Senate Committee on Armed Services.

Army officials are aware of the low proficiency of Army tank units and have initiated actions to correct the problem. Study contracts for the design of a full-crew tank simulator were issued during September 1977, and the Army expects to have a laboratory model available in 1980. Army officials are also evaluating currently available tank simulators that are part-task trainers which may be suitable to meet short-term training needs. Findings/Conclusions: Tank crew proficiency increases significantly during periods of intensive training but drops significantly between the annual firing exercises. Lack of range availability and crew turnover contribute to the problem of maintaining crew proficiency. There are only eight ranges in the free world where the main tank gun can be fired. About 80% of the tank crew members experience a job change every 3 months which adversely affects the overall teamwork of the crew members. A viable solution to the cyclical nature of crew proficiency is the increased use of simulators to provide training between scheduled intensive gunnery exercise. The laboratory model will be used to achieve a better understanding of which cues and which functions are necessary in order to train a crew in an individual or full-crew training environment. Army officials expect to be able to field the full-crew tank simulator sometime between 1985 and 1990, but no firm plans have been developed. Part-task training simulators are currently being manufactured for training tank crews of foreign countries, but they would not fully satisfy the Army's training needs. (SC)

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

FEDERAL PERSONNEL AND COMPENSATION DIVISION

04065

B-175773

NOV 1 1977

The Honorable
The Secretary of Defense

Dear Mr. Secretary:

In February 1976 we called your attention to the low proficiency of Army tank units in Europe and suggested that to overcome this the Department of Defense investigate opportunities for greater use of simulators for tank crew training. We have followed up on this matter and are pleased to report that the Army has recently taken actions to improve the readiness of its tank crews.

Study contracts for the design of a full crew tank simulator were issued during September 1977 and the Army expects to have a laboratory model available in 1980. Army officials are also evaluating currently available tank simulators that are part-task trainers which may be suitable to meet short-term training needs.

URGENT NEED FOR TANK SIMULATOR

Crew proficiency increases significantly during periods of intensive training. Conversely, during periods between annual firing exercises, proficiency drops significantly. In our February 1976 letter, we pointed out that Army tests showed that 70 of the tank units failed to meet standards.

Lack .lability and crew turnover contribute to the probl. ining crew proficiency. According to Army officials, re only eight ranges in the free world where the main can be fired—thus limiting the frequency with wh. crews can participate in firing exercises.

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Crew turnover also contributes to a drop in proficiency after the annual qualification firing exercises. About 80 percent of the tank crew members experience a job change every 3 months, adversely affecting the overall teamwork of the crewmembers by impairing their ability to work together.

Officials at the U.S. Army Armor School, Ft. K x, Kentucky, believe that a viable solution to the cyclical nature of crew proficiency is the increased use of simulators to provide training between scheduled intensive gunnery exercises.

PLANS FOR DEVELOPING FULL CREW TANK SIMULATOR

Although Army officials have for some time recognized the benefits of a tank simulator, little has been done til recently about developing one. In our February 26, 1976, letter, we highlighted the need for such a simulator to improve crew proficiency.

Army officials now agree on the need for a full crew simulator and have initiated actions which resulted in the September 1977 award of two contracts to study its design. The Army expects to award a development contract in 1978 with delivery of a laboratory model scheduled for 1980.

The purpose of the laboratory model approach is to achieve a better understanding of which cues—audio, visual, and motion—and which functions are neceasary in order to train a crew in an individual or full crew training environment. Final simulator design and requirements will be developed from experiences with the laboratory model. The facility will also be used to conduct research in training development, i.e., course curriculum, basis of issue for future training devices, and cost/training effectiveness analyses.

Army officials expect to be able to field the full crew tank simulator sometime in the 1985-1990 timeframe but no firm plans have been developed. The Army has not determined the number of simulators required nor established milestones for acquiring them.

PART-TASK TRAINERS MAY FILL SHORT-TERM TRAINING NEEDS

Simulators are currently being manufactured for training of tank crews of foreign countries. These are part-task training

devices—driver trainer and gunnery trainer—which would not fully satisfy Army's training needs. Neither of these simulators are currently used in the Army for its training.

Since these simulators are readily available, Army officials believe that the devices may be able to satisfy short-term training needs while the full crew simulator is being developed. During October 1977, the Army sent a team to Europe to investigate the potential for using the devices to train its tank crews.

CONCLUSION

Army officials are aware of the low proficiency of tank units and have initiated actions to correct the problem. We believe that efforts to meet Army's short and long term tank crew training needs are underway. We plan to continue monitoring developments in this area to insure that the actions are effective in improving tank crew proficiency.

Sincerely yours,

H. L. Krieger

H. L. Krieger
Director