ARMY TRAINING

Evaluations of Units' Proficiency Are Not Always Reliable
Dear Mr. Chairman:

This report on Army systems for evaluating collective training and the use of evaluation results to report units' combat readiness is in response to your request. It contains recommendations to the Secretary of the Army to improve the accuracy of evaluations and readiness reports.

As you requested, unless you publicly announce its contents earlier, we plan no further distribution of this report until 16 days after its issue date. At that time we will send copies to the Chairman of the Senate Committee on Armed Services; the Chairmen, House and Senate Committees on Appropriations; the Director, Office of Management and Budget; and the Secretaries of Defense and the Army. Copies will also be made available to other interested parties upon request.

Please contact me at (202) 275-4141 if you or your staff have any questions concerning this report. GAO staff members who made major contributions to this report are listed in appendix III.

Sincerely yours,

Richard Davis
Director, Army Issues
Executive Summary

Purpose

To assess the combat readiness of its forces, the Army uses a number of measures, including an assessment of the proficiency of unit training. The quality of this assessment is of great importance because it is used by higher commands and the Joint Chiefs of Staff to make decisions on which forces to use in contingency operations. This report, requested by the Chairman of the Subcommittee on Readiness of the House Committee on Armed Services, focuses on the quality of Army systems for evaluating training and the use of evaluation results to report units' combat readiness. Specifically, GAO sought to determine (1) the reliability and usefulness of collective training evaluations to assess active Army and National Guard units' proficiency to perform wartime mission tasks and (2) the validity of training readiness assessments in unit status reports for active Army units.

Background

According to Army doctrine, units' training proficiency is to be measured on the basis of demonstrated ability to accomplish mission-essential tasks under likely wartime conditions. Most training for active Army units occurs at home stations, which vary in the types and extent of training facilities and resources available. Self-evaluations of home-station training are made continuously by unit commanders. Periodically, units are formally evaluated by their higher command. About once every 16 months, active units in the continental United States participate in training exercises at combat training centers (the National Training Center and the Joint Readiness Training Center). At these centers, units train under more realistic wartime conditions than are usually possible at home stations.

Training for Army National Guard units is evaluated by active Army observers using the so-called 1-R report prepared during the units' annual 2-week training period. These evaluations are the primary external source of information to commanders on Guard unit proficiency.

Results in Brief

Because home-station training for active Army units generally lacks realism and evaluators use ambiguous criteria and may not be objective, evaluation results do not provide reliable information about units' proficiency to perform wartime missions. Moreover, training readiness assessments in unit status reports of active Army units may be overstated and the information provided to higher commands and the Joint Chiefs of Staff is of limited value because the assessments (1) are based
Executive Summary

on training conducted primarily at home stations and (2) may not ade-
quately consider the effect on proficiency of the loss of key personnel.

GAO found that proficiency of active Army units as measured by their
performance under more rigorous conditions at combat training centers
is often less than that indicated by readiness reports. This difference
probably exists because training centers provide (1) large, well-trained,
and well-equipped opposition forces; (2) highly realistic wartime envi-
rornents that cannot be created at most home stations; and (3) more
thorough and objective evaluations than those performed at home
stations.

Evaluations of Army National Guard units’ annual training provide even
less reliable and useful information to higher commands than do active
Army home-station evaluations. These evaluations are based on training
often conducted under unrealistic conditions and are not focused on mis-
sion-essential tasks. Moreover, the evaluations provide often general
and sometimes conflicting information. Since the 1-R evaluation may be
the only information external to the unit available to commanders to
complete training readiness reports, these reports, too, are not likely to
be valid.

Principal Findings

Home-Station Training
Evaluations of Active
Army Units Provide
Information of Limited
Value

Army doctrine requires units to train as they intend to fight—that is,
training must integrate such realistic conditions as smoke; noise; simu-
lated nuclear, biological, and chemical warfare; and loss of key leaders.
However, the home-station training that GAO observed in many instances
lacked realism. For example, it sometimes did not employ a credible
opposing force; used minimal or no smoke; generally did not include
nuclear, biological, and chemical operations or the simulated loss of key
leaders; and did not integrate combat arms, combat support, and combat
service support into a combined arms team.

Also, formal evaluations of home-station training are not as objective or
thorough as might be expected. According to officials of several of the
units GAO visited, evaluation comments are influenced by the evaluators’
desire not to damage a commander’s career by highlighting significant
weaknesses. Instead, weaknesses are often discussed informally but are
not included as part of the formal evaluation report.
Executive Summary

Training Readiness of Active Army Units May Be Less Than Reported

Assessments of unit training proficiency that are based on home-station training may not adequately measure a unit's combat ability. In comparing reported training readiness and stated proficiency in mission-essential tasks with the proficiency in those same tasks demonstrated at combat training centers, GAO often found differences. Of the seven battalions GAO reviewed, all demonstrated less proficiency at the combat training center than what was reflected in readiness reports and in home-station training evaluations. For example, a field artillery battalion assessed as fully trained in providing fire support was unable to provide effective fire support during the entire exercise period at the training center. In another instance, a light infantry battalion assessed as fully trained to perform an air assault conducted an assault against the wrong location and suffered casualties by friendly forces.

GAO also found that the Army's procedures for determining unit readiness did not adequately consider the impact of reductions in training opportunities or of changes in unit leadership following exercises at combat training centers. For example, four of the seven active Army battalions GAO studied conducted little or no unit training for 3 months following their training center exercises. And, for one of these units, nearly 60 percent of the soldiers in key leadership positions were transferred soon after returning from the center. However, only two of the units reduced their reported training readiness level below the level they reported prior to training at the center.

Usefulness of National Guard Training Evaluations Are Even More Limited

Evaluations of the performance of National Guard units during the annual 2-week training periods that GAO observed provided commanders with information of limited value. Because these evaluations were based on training that was often conducted under unrealistic conditions and did not focus on the units' mission-essential tasks, they overstated the proficiency of National Guard units. Moreover, the evaluations were based on only limited observations of training. GAO reported in 1989 on the lack of realism in reserve components' training. Although the Army has initiated some corrective actions, observations made in this review showed that training realism has not improved significantly since that time. For example, inadequate support by host installations hampered realistic training: promised munitions were not provided to one unit, while another was not given advance notice that firing ranges would be closed during its training.
Executive Summary

There is little or no review by higher commands of the 1-R reports that are prepared by evaluators, as evidenced by the often general and sometimes contradictory information the reports contained. Also, the quality of evaluations is hampered because evaluators have only a few days to make observations and prepare written assessments. Evaluators for most of the units GAO visited completed their 1-R reports by the end of the first week of the 2-week training period. Consequently, the evaluations cannot be considered comprehensive indexes of National Guard units’ training proficiency or useful to commanders for planning future training.

Recommendations

GAO recommends that the Secretary of the Army change the training readiness reporting system for active Army units from one that is based largely on the commander’s assessment of training conducted at home stations to one that uses the independent assessment of proficiency that is demonstrated at combat training centers as a baseline.

GAO also makes several recommendations regarding the features the new system should have (see ch. 2) and for improving National Guard training evaluations (see ch. 3).

Agency Comments

The Department of Defense provided oral comments on a draft of this report. The Department generally agreed with most of GAO’s findings and recommendations but said that basing training readiness for active Army units on performance at combat training centers was infeasible because (1) training opportunities at combat training centers are infrequent and (2) other training-related factors affect readiness assessments. GAO’s recommendation has been clarified to propose only that the baseline for making readiness assessments be changed. Combat training center results, rather than home-station training, would become the baseline assessment, with subsequent assessments factoring in the results of home-station training and other training-related information.
# Contents

## Executive Summary

## Chapter 1
### Introduction
- Importance of Training Evaluations
- Training Evaluations at Home Stations
- Training Evaluations at Combat Training Centers
- Training Simulation
- Objectives, Scope, and Methodology

## Chapter 2
### The Reported Training Readiness of Active Army Units May Be overstated
- Unrealistic Conditions of Home-Station Training Limit the Usefulness of Evaluations
- Evaluations of Home-Station Training Do Not Include Some Mission Essential Tasks
- Evaluation Emphasis Has Varied Among Exercises and Divisions
- CTCs Provide the Most Realistic Evaluation of Unit Proficiency
- CTC Evaluations Indicate That Units Are Less Ready Than Reported
- Readiness Reports May Not Adequately Consider Reduced Training Opportunities and Changes in Unit Leadership
- Army Assessment Criteria Are Ambiguous
- Conclusions
- Recommendations
- Agency Comments and Our Evaluation

## Chapter 3
### Evaluations of Army National Guard Unit Proficiency Do Not Provide Reliable Information
- Evaluations Are Based on Training That Does Not Adequately Simulate Combat Conditions
- Evaluations Are Based on Limited Observations and Provide Conflicting Information
- Conclusions
- Recommendations
- Agency Comments and Our Evaluation

## Appendixes
- Appendix I: Examples of Variances Between Proficiency Assessments for a Field Artillery Battalion

Page 6
Appendix II: Examples of Variances Between Proficiency Assessments for a Light Infantry Battalion

Appendix III: Major Contributors to This Report

Tables

Table 1.1: Army Training Readiness Levels
Table 1.2: Examples of Training Simulators Used to Improve and Evaluate Proficiency
Table 1.3: Number and Type of Battalions Visited
Table 2.1: Examples of Critical Subtasks Not Evaluated at Infantry and Armor Units
Table 2.2: Examples of Variances Between Proficiency Assessments for a Mechanized Infantry Battalion
Table 2.3: Key Unit Personnel Lost Through Transfers Following CTC Training
Table 2.4: Training Readiness Reported by the Units Studied
Table 2.5: Commander's Assessment of Proficiency in Providing Fire Support

Abbreviations

ARTEP  Army training and evaluation program
CTC  combat training center
DOD  Department of Defense
GAO  General Accounting Office
JRTC  Joint Readiness Training Center
MILES  Multiple Integrated Laser Engagement System
NBC  nuclear, biological, and chemical
NTC  National Training Center
Chapter 1

Introduction

The U.S. Army must be ready at all times to either deter war or conduct successful combat operations. Training, the cornerstone of readiness, prepares soldiers and units to fight and win in combat. Evaluations of training conducted by Army units provide information to commanders on their units' ability to meet the performance standards established for successful combat operations. Training evaluation, therefore, is an essential part of Army training.

Importance of Training Evaluations

According to the Army’s training doctrine, “Every soldier, leader, and unit training program must be carefully planned, aggressively executed, and thoroughly assessed.” Assessments of unit proficiency are important to the unit, since they form the basis for planning future training, and to the nation, since they provide top military leaders information on unit readiness.

Training evaluation is an integral and essential part of the training cycle, since it tells commanders how proficient their units are in mission-essential tasks. In this way, the evaluations also provide the basis for commanders to plan future training.

Training evaluations also provide information pertinent to unit readiness, a statement of the unit’s current ability to perform its wartime mission. Commanders of active units report monthly through the Army’s unit status reporting system; commanders of National Guard and Army Reserve units use the same system to report quarterly and semiannually, respectively. Under this system, four areas of readiness are addressed: training, personnel, equipment on hand, and equipment readiness.

Because Army units cannot achieve and sustain peak proficiency in all possible mission tasks, commanders are required to identify those tasks essential to their unit’s wartime mission. The resulting list of mission-essential tasks forms the basis for the commander’s unit training and evaluation program.¹

¹Some commanders can turn to an Army training and evaluation program (ARTEP) that provides guidance, by type of unit, on making a list of mission-essential tasks. The ARTEP also provides performance standards for each task, as well as training evaluation outlines. So far, 167 ARTEP documents have been developed and implemented by the Army’s Training and Doctrine Command; another 272 ARTEP documents are planned or being developed.
Commanders use recent training evaluations along with a number of other training-related factors to assess their units' proficiency in mission-essential tasks. In addition to an assessment of collective training proficiency, Army Regulation 220-1 directs commanders making an assessment of unit training readiness to consider factors such as leader qualifications, weapons proficiency, equipment present for training, and so on. The assessed proficiency is reported as a "C" rating, ranging from C-1 to C-4 (see table 1.1), that represents the commander's estimate of the number of days needed for the unit to be fully trained in all mission-essential tasks.

Table 1.1: Army Training Readiness Levels

<table>
<thead>
<tr>
<th>Level reported</th>
<th>Estimated days needed to be fully trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1</td>
<td>0–14</td>
</tr>
<tr>
<td>C-2</td>
<td>15–28</td>
</tr>
<tr>
<td>C-3</td>
<td>29–42</td>
</tr>
<tr>
<td>C-4</td>
<td>more than 42</td>
</tr>
</tbody>
</table>

Commanders combine their assessment of training with similar assessments of personnel and equipment to determine an overall readiness level for their units. These ratings are then passed on in unit status reports to higher command levels in the Army, as well as to the Chairman of the Joint Chiefs of Staff and national command authorities who use them in formulating military assessments and deciding which forces to use in contingency operations.

Army training doctrine advises commanders to allocate time throughout the year when training has priority over all competing activities at home stations. Commanders use various time-management systems to create prime-time training periods. In effect, time management systems allocate time in a cyclic fashion for individual training, collective training, and support functions. This cyclic approach to training recognizes that individual soldier and crew skills are essential to unit proficiency and provides specific periods of time when each can be accomplished and evaluated.

Training of individual soldiers focuses on tasks that are critical to performing their jobs successfully and to surviving on the battlefield. For example, an infantryman is trained to engage targets with his individual weapon and to install antipersonnel mines. On the other hand, crew
training focuses on small groups that must work together effectively. For example, infantry squads within an infantry unit must act as a team to perform an ambush. Most individual and crew training takes place at units’ home stations.

Commanders receive information on soldier and crew proficiency from many sources. Informal evaluations are provided through personal observations of training made by the commander himself and other key leaders. More objective, formal information is provided through tests of individuals and crews. For example, each year all soldiers must demonstrate proficiency in selected survival and job skills. Crews demonstrate collective proficiency through such tests as mortar and tank gunnery exercises. These standardized tests, developed by the Army’s Training and Doctrine Command, are administered by Army units.

Unit-Level Training

In large part, unit-level training takes the form of field exercises at platoon through battalion levels, command-post exercises for staff, and live-fire exercises. Some divisions also conduct combined arms exercises involving two maneuver battalions, though the land constraints of home stations limit such exercises.

At home stations, most unit training evaluations are based on self-evaluations and conclude with “after-action reviews.” At least every 18 months, however, units are formally evaluated by their higher command to determine proficiency in selected mission-essential tasks. This evaluation is based on conditions and standards published in ARTEP documents.

Using all sources of information available, commanders continuously assess the units’ trained status based on the various training events conducted. Quarterly, commanders brief to higher headquarters an assessment of their unit’s proficiency in mission-essential tasks. According to the Army’s Field Manual 25-100, Training the Force, commanders are guided in training assessments by their experience and their key subordinates’ knowledge. Gauging proficiency against the ARTEP task standards (when available), commanders rate their unit in each essential task as “trained,” “needs practice,” “untrained,” or “unknown.”

2 A platoon is comprised of several squads, and several platoons form a company. A battalion is a unit comprised of a headquarters and two or more companies.
Training Evaluations at Combat Training Centers

The Army's Combat Training Centers (CTCS) provide the most realistic environment available for unit training during peacetime and the most comprehensive, objective evaluation of unit proficiency.

The Army operates three CTCS designed to allow large-scale unit maneuvers. Two centers—the National Training Center (NTC) and the Joint Readiness Training Center (JRTC)—are in the continental United States. The NTC, which covers 640,000 acres at Fort Irwin, California, provides training to heavy and light infantry divisions in a mid- to high-intensity conflict. The JRTC, at Fort Chaffee, Arkansas, provides training for light infantry divisions in a low- to mid-intensity conflict on its 73,000 acres. A third training center is the Combat Maneuver Training Center at Hohenfels, Germany.

The NTC and the JRTC conduct 23 training rotations annually (14 brigade rotations at the NTC and 9 battalion rotations at the JRTC). All of the active component heavy infantry and armor brigades based in the continental United States have trained at the NTC several times, averaging one visit every 14 to 16 months. The Army National Guard roundout brigades and some light infantry units have also trained at the NTC. The JRTC, which plans to increase its annual training rotations to 12, has provided training to 25 battalions since it began operating.

The CTCS require units to conduct offensive and defensive operations over 11 to 14 days in an environment very similar to that of actual warfare—an opportunity not generally provided at home stations. At the NTC, training consists of live-fire exercises and engagements with an opposing force of 2,800 personnel that simulates a Soviet motorized rifle regiment, using Soviet tactics and U.S. vehicles modified to look like their Soviet counterparts. At the JRTC, the opposing force consists of about 300 personnel. Live fire at the JRTC is focused on platoon-size units.

Force-on-force exercises at the CTCS use the Multiple Integrated Laser Engagement System (MILES) to increase realism and objectivity. This system, which is carried by troops and mounted on equipment, instantly informs soldiers and units of a "kill" or "near-kill." MILES enables commanders to see immediately the results of their orders and tactics.

Data from the CTCS's instrumented battlefield is gathered from several sources. At the NTC, exercise observers/controllers tape radio transmissions to help determine what happened during the exercises and videotape operations with stationary and mobile cameras. The NTC's computer...
system, which is tied into MILES and the live-fire targets, also provides objective data for evaluations. In addition, the observers and controllers make subjective evaluations of unit performance. At the JRTC, data pertaining to mission-essential tasks is collected by experienced observers and controllers and analyzed to provide statistical and narrative summaries of unit performance.

Data from these sources is used after each exercise to give the units immediate evaluation in the form of after-action reviews. The data is also summarized to provide the units “take-home” packages that include

- videotaped summaries of briefings,
- map overlays of the units’ movements and maneuvers during the various exercises, and
- diagnostic results for use in evaluating the units’ past training programs and their home-station needs.

Training Simulation

Units can also take advantage of training simulation to improve and evaluate proficiency. Simulations offer effective training alternatives when maneuver and gunnery opportunities are limited. They provide information that can be used to evaluate individual and unit proficiency and to identify training needs.

Simulations, in general, do not provide a fully adequate substitute for traditional field training, but they do provide a realistic supplement. In some cases, however, a simulation may be preferred over traditional field training. For example, Department of Defense officials told us that it is more efficient and effective to train in the unit conduct-of-fire trainer rather than in a tank during the early stages of tank gunnery training. (Table 1.2 lists examples of simulator systems in use and describes how they help training and evaluation.)
Table 1.2: Examples of Training Simulators Used to Improve and Evaluate Proficiency

<table>
<thead>
<tr>
<th>System</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct-of-fire trainers</td>
<td>Crews of the M-1 tank and Bradley Fighting Vehicle are trained in command and control and gunnery procedures.</td>
</tr>
<tr>
<td>Full-mission simulators for attack helicopters</td>
<td>Pilots and weapon system officers of the Cobra and Apache helicopters are trained in all aspects of flight and attack operations.</td>
</tr>
<tr>
<td>Battle simulations</td>
<td>Several simulations are available to expose staffs and leaders to a lethal, complex, modern battlefield. These simulations develop leader responsiveness to large-scale battle situations without the need to involve large numbers of soldiers.</td>
</tr>
</tbody>
</table>

Objectives, Scope, and Methodology

The objectives of this review were to determine (1) the reliability and usefulness of collective training evaluations to assess active Army and National Guard units' proficiency in performing their wartime mission tasks and (2) the validity of training readiness reports for active Army units.

To accomplish these objectives, we judgmentally selected (1) 6 active Army battalions, (2) 10 Army National Guard organizations (9 battalions and 1 company), and (3) 1 Army Reserve company. In the reserve components, we primarily selected National Guard units because we wanted to focus on combat organizations. (Table 1.3 shows the number and types of battalions we visited.) These active and reserve units represent three Army divisions and seven states.

Table 1.3: Number and Type of Battalions Visited

<table>
<thead>
<tr>
<th>Type of unit</th>
<th>Active battalions</th>
<th>Guard battalions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infantry</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Anti-tank</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Mechanized infantry</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Light infantry</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Armor</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Field artillery</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Aviation</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Support</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Maintenance</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Signal</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

We visited active Army units at their home station and a CTC and observed the training conducted at the time of our visits. We observed
the conditions under which the units trained; discussed with unit officials how mission-essential tasks had been selected; attended after-action reviews; and reviewed or discussed external evaluation reports. We compared unit proficiency as shown in commanders' quarterly training assessments with evaluation results reported by the CTCs. This comparison was made for mission-essential tasks and battlefield operating systems to determine whether the evaluation results were consistent with reported training readiness levels.⁹

We visited one National Guard battalion during its CTC training and the remaining reserve component units during their annual 2-week training and discussed with their commanders and training evaluators (1) demonstrated unit proficiency in mission-essential tasks and (2) training realism. We also compared evaluation results with our own observations to determine whether they accurately reported the training conducted and provided information on proficiency in mission-essential tasks. In addition, we observed both active and reserve units training during an overseas deployment and discussed evaluations of this training with commanders to obtain a perspective of the evaluative information gained.

We did not select a statistical sample to project our unit findings. However, we believe the observations discussed in this report provide a sound basis for drawing broad conclusions. First, officials throughout the Army—Training and Doctrine Command, Forces Command, NTC, and JRTC—told us that our observation that units generally perform better at home stations than at CTCs is widely recognized by the Army. Second, the Army's 1988 study of training in the reserve components concluded that none of the assessment tools used to estimate a unit's operational capability provided a reliable and valid assessment to higher commands. Again, officials throughout the Army told us that this conclusion is still valid.

To understand the Army's policies and procedures for collective training evaluations, we interviewed officials at the following headquarters offices: Department of the Army, Washington, D.C.; the Chief, Army Reserve, Washington, D.C.; the National Guard Bureau, Washington, D.C.; Training and Doctrine Command Headquarters, Fort Monroe, Virginia; Forces Command Headquarters, Fort McPherson, Georgia; and

---

⁹Battlefield operating systems are used to systematically ensure that all elements of an organization's combat power are directed toward accomplishing the overall mission. These systems represent the major functions that occur on the battlefield and that must be performed by the force to successfully execute operations.
Chapter 1
Introduction

Second Army and the Headquarters Office of the Adjutant General of the State of Georgia, Atlanta, Georgia.

The Department of Defense provided oral comments on a draft of this report. We incorporated their comments as appropriate. We conducted our work from September 1989 through September 1990 in accordance with generally accepted government auditing standards.
Chapter 2

The Reported Training Readiness of Active Army Units May Be Overstated

Because home-station training for active Army units generally lacks realism and evaluators use ambiguous criteria and may not be objective, evaluation results do not provide reliable information about units' proficiency to perform wartime missions. Moreover, training readiness assessments of active Army units may be overstated, and the information provided to higher commands and the Joint Chiefs of Staff is of limited value because the assessments (1) are based on training conducted primarily at home stations and (2) may not adequately consider the effect on proficiency of the loss of key personnel. Proficiency in mission-essential tasks demonstrated under more realistic conditions at the Army's CTCS provides a more valid indication of unit readiness.

Unrealistic Conditions of Home-Station Training Limit the Usefulness of Evaluations

Army doctrine requires units to train as they intend to fight. In describing this essential principle, Army Field Manual 25-100, Training the Force, states the following:

"The goal of combat-level training is to achieve combat-level standards. Every effort must be made to attain this difficult goal.... Leaders must demand realism in training. They must integrate such realistic conditions as smoke, noise, simulated NBC [nuclear, biological, and chemical warfare], battlefield debris, loss of key leaders, and cold weather. They must seize every opportunity to move soldiers out of the classroom into the field, fire weapons, maneuver as a combined arms team, incorporate protective measures against enemy actions, and include joint and combined operations."

The home station training that we observed, however, lacked realism. For example, some units did not employ a credible opposing force, used minimal or no smoke, generally did not include NBC training or the simulated loss of key leaders, and did not incorporate combat service support elements. Moreover, the training generally did not integrate combat arms, combat support, and combat service support into one exercise as a combined arms team.

Simulation of Opposing Forces

Though each battalion trained against an opposing force, the size and makeup of that force and the length of time that it remained a dedicated unit varied greatly.

- One installation had dedicated a cavalry unit as the opposing force and regularly augmented it with a tank company to challenge friendly forces. The unit was a well-trained opposing force that regularly used Soviet tactics and painted its equipment to look like Soviet equipment.
At another installation, one battalion within each brigade served as the opposing force on a 6-month rotation. This force was used to oppose only armor and mechanized infantry units. It provided no training for mortar, scout, or field artillery units, nor did it modify the appearance of its vehicles.

At a third installation, the division did not have a dedicated opposing force. Consequently, the infantry battalion that we observed trained against an engineer platoon from another brigade.

None of the exercises that we observed required units to defend against (simulated) artillery attacks by the opposing force, and only two of the nine exercises required units to defend against simulated air attacks.

All the units used the MILES devices to add objectivity to the exercises involving an opposing force.

Use of Smoke

Half of the home-station training involving armor, mechanized infantry, and infantry units incorporated smoke. When smoke was used by one unit, it seldom masked vehicles or soldiers as intended. One armor unit's continuous use of smoke did not effectively mask its movement during an attack because the method used to generate smoke was unrealistic—unit personnel generating the smoke did it in plain view of the opposing force.

NBC Warfare

Two exercises provided no nuclear, biological, and chemical training. And when NBC training was conducted, it was done in an unrealistic manner. For example, one infantry unit simulated a chemically contaminated area by placing warning cards on the ground and trees. However, because the exercise was conducted at night, the soldiers could not see the cards and react accordingly. In only one exercise did we see soldiers use their protective masks (which they usually carried) or train in suits designed to protect them during chemical attacks. Officials at most of the units told us that this equipment hampers training because it is extremely hot to wear and the suits impede the soldiers' efficient performance of their tasks.

Opportunity for Maneuver

At one installation only 25 percent of the available land could be used by battalions for maneuver training, so realistic battalion-level and combined arms training could not be performed. At another installation maneuver space was restricted due to the manner in which available land was used. The total available training land was divided into smaller
training areas, and movement was restricted to narrowly defined corridors. This was done to allow more units to train on the available land rather than allowing individual units access to larger maneuver areas.

**Loss of Key Leaders**

None of the training simulated the loss of key leaders to determine whether units could retain command and control.

**Incorporation of Support Elements**

None of the training fully incorporated combat service support operations. Commanders told us that valuable training time would be lost if functions such as resupply and personnel replacement were included.

**Continuous Operations**

Many of the training exercises did not simulate the constant stress of battle. Units were not required to combat an opposing force between exercise phases—a condition that could simulate the unrelenting demands of the battlefield on leaders and soldiers. Instead, each training event occurred independently of others. Moreover, officials told us that several exercises were discontinued on weekends because division policy restricts weekend training. Instead of continuing the exercises, equipment is left in the field while the soldiers are transported back to the garrison to allow them time off.

**Evaluations of Home-Station Training Do Not Include Some Mission-Essential Tasks**

Assessments of unit proficiency that are used as inputs for readiness reporting are also hampered because the evaluations of most training events often do not address many tasks critical to unit missions.

The Army's primary system for evaluating unit proficiency in mission-essential tasks consists of evaluations conducted under the ARTEP program at the unit's home station. Although both internal and external evaluations are made, we focused on the more independent external evaluations conducted under the ARTEP program. Four of the seven battalions that we observed were evaluated externally at their home stations before training at a CTC. These evaluations did not, however, include many of the tasks critical to the units' missions. For example, three of the four battalions (one mechanized infantry and two armor battalions) were not evaluated in most of their mission-essential NBC tasks, and two battalions were not evaluated in many subtasks essential to mission execution (see table 2.1).
The amount of emphasis placed on evaluating unit proficiency varied among the training exercises and after-action reviews that we observed. The evaluation methodologies ranged from no evaluation to formal evaluations involving many evaluators from outside the unit.

At home stations the primary evaluation methodology involved after-action reviews conducted at the company and platoon levels by key unit leaders. The after-action reviews we observed were not conducted above the battalion level, even though in one instance more than one battalion within the brigade trained together.

In observing after-action reviews, we noted differences in evaluation quality. At two divisions, perspectives were obtained from many training participants in an effort to learn from the training experience. Commanders told us that they had gained valuable insight from these reviews. At another division, however, unit commanders told us that they had learned little about demonstrated proficiency from the reviews because insufficient time had been set aside to discuss the unit’s performance.

Evaluators reported formal proficiency results only in conjunction with evaluations made under the ARTEP program. All other evaluations were informal after-action reviews. For example, units we visited in Germany during the latest “Return of Forces” exercise received no external evaluation of their demonstrated proficiency. Moreover, the exercise schedule did not permit time for some units to conduct after-action reviews.
According to officers at several of the units we visited, external evaluations are not as thorough or objective as called for by training guidance. In their opinion, evaluation comments are often influenced by the evaluators’ desire not to damage a commander’s career by highlighting significant weaknesses. The officials said that weaknesses are often discussed informally but not included as part of a formal evaluation report.

CTCs Provide the Most Realistic Evaluation of Unit Proficiency

In some cases, CTC results are used as the external evaluation of units. CTC results offer a more valid indication of proficiency because CTCs provide more realistic training and more thorough and complete evaluations.

- The CTCs provide highly realistic wartime environments that cannot be created at most home stations. As a result, unit proficiency is evaluated under conditions similar to those under which missions would actually be accomplished.
- Units train against dedicated and well-trained opposing forces at the CTCs, thus ensuring that they are evaluated while confronting a formidable force.
- Units must demonstrate their sustainment abilities at CTCs. Under realistic combat conditions, units have to provide full logistical support—performing maintenance in the field, evacuating casualties, replacing lost personnel, and replenishing all items consumed during operations.
- Units are evaluated by a large cadre of independent, well-trained observers/controllers. CTC evaluations are also enhanced by audio, video, and computer systems in place to record objective training data.

Training realism at the CTCs is viewed differently by Army training officials. Training and Doctrine Command officials believe that training at CTCs is too challenging. According to these officials, opposing forces encountered at the CTCs are more formidable than any hostile force the units are likely to face in actual combat, and the stress faced by soldiers and leaders at the CTCs is more demanding than that in real warfare. Other officials believe that the training provided by the CTCs more closely parallels the type of training required by Army doctrine for assessing unit proficiency.
CTC Evaluations Indicate That Units Are Less Ready Than Reported

The proficiency demonstrated by the seven battalions that we observed during NTC and JRTC exercises was often less than the proficiency reported in assessments made at home stations and in readiness reports. This condition is probably due to the more realistic and stressful training conducted at the CTCs.

Five of the seven battalions that we observed during CTC exercises had reported a C-1 status for training—that is, the units were considered fully capable of conducting all mission assignments with 14 days or fewer of additional training. However, our review of the evaluations of their performance at the CTCs showed that they had not fully mastered many of their mission-essential tasks at the completion of the 14-day exercise. Table 2.2 compares the results of the CTC performance of a mechanized infantry battalion reporting a training status of C-1 with the commander's assessment of training readiness from the latest quarterly training briefing given to higher headquarters.
### Table 2.2: Examples of Variances Between Proficiency Assessments for a Mechanized Infantry Battalion

<table>
<thead>
<tr>
<th>Mission-essential task/subtask</th>
<th>Unit commander's assessment</th>
<th>CTC proficiency comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan/control combat operations</td>
<td>Trained</td>
<td>Day 6, Movement to Contact/Meeting Engagement Mission</td>
</tr>
<tr>
<td>Command and control</td>
<td>Trained</td>
<td>Day 10, Hasty Defense Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Day 11, Forward Passage of Lines/Movement to Contact/Meeting Engagement/Hasty Defense Mission</td>
</tr>
<tr>
<td>Attack</td>
<td>Needs practice</td>
<td>Day 6, Movement to Contact/Meeting Engagement Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Day 11, Forward Passage of Lines/Movement to Contact/Meeting Engagement/Hasty Defense Mission</td>
</tr>
<tr>
<td>Perform passage of lines</td>
<td>Needs practice</td>
<td>Day 6, Movement to Contact/Meeting Engagement Mission</td>
</tr>
<tr>
<td>Employ fire support</td>
<td>Trained</td>
<td>Day 6, Movement to Contact/Meeting Engagement Mission</td>
</tr>
</tbody>
</table>
Chapter 2
The Reported Training Readiness of Active
Army Units May Be Overstated

<table>
<thead>
<tr>
<th>Mission-essential task/subtask</th>
<th>Unit commander’s assessment</th>
<th>CTC proficiency comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Artillery fired one mission, and it was not focused or massed on the enemy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Day 7, Movement to Contact/Meeting Engagement Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Task force mortars fired 105 rounds ineffectively. One mortar section ran out of ammunition.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Day 4, Offense Mission (Live Fire)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A mortar section was unable to execute a call for fire because it had no idea where friendly elements were located.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>While executing a fire mission, the mortar sections were ordered to cease fire because six rounds of ammunition landed 1,800 meters short of the intended target.</td>
</tr>
<tr>
<td>Conduct/sustain operations</td>
<td>Needs practice</td>
<td>Supply operations need to improve significantly. Generally, leaders never had tactical or combat service support plans and were unable to track the battle and replace destroyed assets forward.</td>
</tr>
<tr>
<td>Operate field trains</td>
<td>Trained</td>
<td>The task force experienced significant difficulties resupplying its forward units.</td>
</tr>
<tr>
<td>Nuclear, biological, chemical (NBC)</td>
<td>Needs practice</td>
<td>The task force did not organize supply lines in accordance with current doctrine.</td>
</tr>
<tr>
<td>React to chemical attack</td>
<td>Trained</td>
<td>Day 3, Defense Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Of the 125 soldiers observed, 114 did not react properly to chemical attack.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemical contamination on vehicles, personnel, and on the ground was not reported accurately or in a timely fashion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Day 14, Deliberate Attack Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inaccurate reporting and failure to mark the decontaminated location caused significant problems as follow-on forces entered the area. There was a loss of momentum in the attack, loss of command and control, 94 casualties, and 30 contaminated vehicles.</td>
</tr>
</tbody>
</table>

(continued)
Chapter 2
The Reported Training Readiness of Active
Army Units May Be Overstated

<table>
<thead>
<tr>
<th>Mission-essential task/subtask</th>
<th>Unit commander's assessment</th>
<th>CTC proficiency comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform NBC operations</td>
<td>Needs practice</td>
<td>Contaminated areas were not marked in any fashion after initial discovery. Failure to mark areas increased the number of casualties and contaminated vehicles. Individual NBC skills were deficient. Numerous casualties were caused by failure to correctly mask, wear protective posture gear, follow unmasking procedures, perform basic decontamination procedures, and use chemical detection and identification equipment.</td>
</tr>
<tr>
<td>Day 2, Defense Mission (Live Fire)</td>
<td></td>
<td>Day 14, Deliberate Attack Mission</td>
</tr>
<tr>
<td>The chemical agent used against the task force was never reported. Some elements did not conduct unmasking procedures after the chemical attack.</td>
<td>The entire dismounted task force, including the engineer platoon, was in position to cover the enemy's emplacement of an artillery-delivered minefield, but it took no actions to mask or warn other friendly forces.</td>
<td></td>
</tr>
</tbody>
</table>

As shown, there are variations between the trained readiness of the battalion as assessed by the commander based primarily on home-station training results and the proficiency actually demonstrated by the battalion under more realistic conditions at a CTC. (Appendixes I and II illustrate similar variations for field artillery and light infantry battalions also reporting a C-1 training readiness status.)

Take-home packages prepared by CTCs contain a vast amount of valuable information but do not readily facilitate comparative analysis. Home-station proficiency assessments are organized by mission-essential task and battlefield operating system for each task. The take-home packages provided by the NTC and JRTC, however, do not facilitate this type of assessment because they summarize unit performance trends by battlefield operating system and mission rather than by mission-essential task. The packages also do not provide a summary of unit strengths and weaknesses by task. As a result, to develop a comprehensive assessment by mission essential task for the entire CTC period, information must be pieced together from various sections throughout the package.
Readiness Reports May Not Adequately Consider Reduced Training Opportunities and Changes in Unit Leadership

According to Army officials at the units we visited, units achieve their highest state of readiness upon completion of a CTC visit. However, Army procedures for determining unit readiness do not consider the effect of reductions in training opportunities or changes in key unit leadership following CTC training. Several of the units we studied conducted little or no unit training for 3 months following their CTC visit and lost significant numbers of key leaders during that time. Yet only two of the seven units reduced their reported trained readiness below the level reported prior to the CTC visit.

Reduced Training Opportunities

Army training programs are cyclical by design. At the divisions we visited, a three-cycle approach was used—red (units support the installation to the extent needed), amber (individual training is emphasized), and green (collective training is emphasized). The length of each cycle varies by unit. The training cycles were sequenced so that units preparing for the CTC were in the individual and collective training cycles immediately before the CTC visit. This allowed the units time to "train up" for the CTC, while other units were responsible for filling installation support requirements.

Upon returning from a CTC, units entered a support or individual training cycle, while other units received priority for unit training resources. According to officials at the four active Army battalions we contacted after their return from the CTC, only limited or no unit training was accomplished for at least 3 months.

Changes in Unit Leadership

To develop unit cohesion and foster unit proficiency, the Army delays routine personnel transfers until after CTC training. As a result, units often experience a substantial turnover in key personnel following CTC exercises.

In most of the units we visited, a significant number of soldiers in key leadership positions were replaced soon after completing CTC training. At one field artillery battalion, for example, nearly 60 percent of the soldiers in key leadership positions were replaced (see table 2.3).
Table 2.3: Key Unit Personnel Lost Through Transfers Following CTC Training

<table>
<thead>
<tr>
<th>Key position</th>
<th>Mechanized infantry battalion</th>
<th>Armor battalion</th>
<th>Field artillery battalion</th>
<th>Aviation battalion</th>
<th>Light infantry battalion</th>
<th>Light infantry battalion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commander</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive officer</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Command sergeant major</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-1 (adjutant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-2 (intelligence officer)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-2a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-3 (operations officer)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistant S-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-4 (supply officer)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammunition officer</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire support officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire direction officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical officer</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance officer</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master gunner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

*Noncommissioned officer in charge.

In addition to the number of key personnel replaced at the battalion staff level, some companies within the battalions also lost many key leaders. For example, at one battalion, three company commanders, two company executive officers, and six platoon leaders were replaced.

Effect on Readiness May Not Be Recognized

Despite losing a number of key personnel and conducting little or no unit training during the 3 months following the CTC visits, three of the units we visited continued to report a training readiness rating of C-1, as shown in table 2.4.
In our view the replacement of so many soldiers in key leadership positions and the lack of unit training opportunities would adversely affect unit capability. According to a brigade operations officer, new leaders need time to develop an understanding of the strengths and weaknesses of subordinates through training observations, and subordinate leaders need time to learn the leadership and mission-execution techniques preferred by new commanders. Moreover, team techniques learned during CTC exercises may no longer be applicable to a unit with new leaders in many critical positions.

One reason that reported readiness levels are not affected by the replacement of key leaders, regardless of the number, is that readiness reporting criteria do not consider the experience of the unit's officers, such as company and battalion commanders. While personnel turnover is reported in the readiness report, neither it nor any other factor directly affects the assessment of personnel readiness and unit training readiness in that report. According to a brigade training officer, training readiness is based on the training events conducted. He told us that even though those events might be few or involve only small units, the trained status reported for the previous month is continued unless the training results indicate a significant readiness degradation.
Chapter 2
The Reported Training Readiness of Active Army Units May Be Overstated

Army Assessment Criteria Are Ambiguous

Criteria used to determine proficiency in mission-essential tasks are too general to ensure consistent assessments among units. Army doctrine prescribes a standard set of criteria—“trained,” “needs practice,” and “untrained”—for commanders to use in assessing critical task proficiency of both active and reserve component units. Army training regulations define these criteria as follows:

“Trained. The unit can successfully perform the task to standard. Only sustainment training is needed. The leader judges task performance to be free of significant shortcomings. Practice on "T" tasks is designed to keep soldiers from losing proficiency.”

“Needs Practice. The unit can perform the task with some shortcomings. The shortcomings are not severe enough to require complete retraining. Only refresher training is required.”

“Untrained. The unit cannot perform the task to standard. The leader prepares a comprehensive strategy to train all supporting tasks not executed to standard.”

These criteria require commanders to exercise considerable judgment. Depending upon a commander’s personal interpretation of “significant,” “some,” and “severe,” critical tasks could be assessed as “trained,” “needs practice,” or “untrained” and result in a training proficiency assessment different than that of a unit of similar proficiency. For example, one artillery battalion that we observed at the NTC demonstrated significant weaknesses in providing fire support to maneuver units. Yet just before the NTC visit, the unit commander had assessed the unit in this task as trained. This was so even though during its assessment more than half of the subtasks were assessed as “needs practice” (see table 2.5).

Table 2.5: Commander’s Assessment of Proficiency in Providing Fire Support

<table>
<thead>
<tr>
<th>Area of assessment</th>
<th>Assessed proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtask</td>
<td></td>
</tr>
<tr>
<td>Passage of lines</td>
<td>Needs practice</td>
</tr>
<tr>
<td>Movement to contact</td>
<td>Trained</td>
</tr>
<tr>
<td>Offensive operations</td>
<td>Trained</td>
</tr>
<tr>
<td>River crossing</td>
<td>Needs practice</td>
</tr>
<tr>
<td>Defensive operations</td>
<td>Trained</td>
</tr>
<tr>
<td>Exploitation</td>
<td>Needs practice</td>
</tr>
<tr>
<td>Retrograde operations</td>
<td>Needs practice</td>
</tr>
<tr>
<td>Overall</td>
<td>Trained</td>
</tr>
</tbody>
</table>
Conclusions

Because home-station training generally lacks realism and evaluators may not be objective and use ambiguous criteria, evaluation results do not provide reliable information about units' proficiency to perform wartime missions. Moreover, basing training readiness assessments primarily upon a limited number of mission-essential tasks conducted under artificial training conditions at home stations may overstate units' training readiness. Also, failure to take into account substantial changes in key personnel or reductions in training opportunities following a CTC visit further decreases the validity of unit readiness reports. Basing training readiness assessments on CTC exercise evaluations that provide more realistic and challenging training would be a better indicator and provide more complete and reliable information to higher levels of command. To achieve this result and facilitate analysis, however, some modification to the structure of CTC take-home packages will be needed.

Because of the wide latitude commanders can exercise in assessing training proficiency, the Army has no assurance that these assessments are consistent from unit to unit. Moreover, the latitude of interpretation does not provide higher levels of command a full understanding of unit proficiency for tasks assessed as "needs practice." Depending upon the commander's interpretation, the meaning of an assessment of "needs practice" for a mission-essential task could range from only a limited number of subtasks to the majority of subtasks not performed up to standards.

Recommendations

We recommend that the Secretary of the Army change the training readiness reporting system for active Army units from one that is based largely on the commander's assessment of training conducted at home stations to one that uses the independent assessment of proficiency that is demonstrated at CTCs as a baseline. The system should have the following features:

- Take-home evaluation packages offered by the CTCs should summarize unit strengths and weaknesses by mission essential tasks and battlefield operating systems.
- Between CTC rotations, unit commanders should use the strength and weakness information from the take-home packages as a primary source of information used to determine unit training readiness, with each monthly update reflecting (1) training results at home stations that have sustained demonstrated strengths and have eliminated weaknesses and (2) the effect on unit proficiency of the loss of key personnel.
We also recommend that the Secretary develop and implement more definitive criteria for commanders to use to assess unit proficiency. Also, a numerical rating scale should be used to better differentiate proficiency among units.

**Agency Comments and Our Evaluation**

The Department of Defense (DOD) did not agree with our first recommendation. It said that basing readiness reports on CTC results is not feasible or desirable. It pointed out that because units train at a CTC only about once during a commander's 2-year tour of duty, evaluations would lose validity over time. It also commented that readiness is determined by considering numerous factors, not just the performance of tasks during a short training period. DOD did note, however, that it was clear that the results of training at a CTC should be a significant consideration in the commander's overall readiness assessment.

DOD apparently interpreted our recommendation to mean that the commander's readiness assessment should be limited to CTC results. We agree that such an assessment would soon become outdated and that numerous other factors, as indicated by DOD, also affect readiness assessments. We have clarified our recommendation to propose only that the baseline for making readiness assessments be changed. We believe that CTC results, rather than home-station training, should become the baseline assessment, with subsequent assessments factoring in the results of home-station training and other training-related information.

Also, we believe that DOD's comments understate the significance and relative standing of CTC training and its results. In actual practice, a battalion or brigade rotation to a CTC is the most significant training event for a commander and his unit during the commander's entire tour of duty. As a result of a strong desire for their units to perform as well as possible at a CTC and because of competing demands on resources, commanders give priority for resources to units preparing to go to a CTC.

The importance of performing well can be illustrated by the impact on other units of this practice of uneven resource distribution. A training official at one installation told us that the system of giving resource priorities to units training up to go to the NTC creates a "feast or famine" situation in that units not training up go for extended periods of time with limited training. One battalion commander told us that his unit had not had any platoon- through battalion-level maneuver training for

---

1Ongoing GAO review of Army training land requirements.
8 months because it had to spend time providing support to other installation activities. Therefore, DOD's characterization of CTC training as “just the performance of tasks during a short training period” greatly understates the significance of the training and of the preparation that takes place for it.

DOD also said that our recommendation was not feasible because not all units participate in CTC rotations. It pointed out that many non-divisional units do not participate in CTC rotations and that only certain portions of combat support and combat service support units participate in the rotations. Clearly, our recommendation would not apply to these units. We believe, however, that the benefits to be gained from changing the assessment baseline for the large number of combat and related support units that do train at CTCs far outweigh any disadvantages that may be associated with deviating from a uniform assessment system.

DOD generally agreed with our remaining recommendations. Concerning modification of the structure of CTC take-home packages, DOD said that the Training and Doctrine Command, in conjunction with Forces Command, will evaluate the content of the packages. DOD also said that it had commissioned the Rand Corporation to develop more objective assessment criteria, and while it was not clear that a numerical scale would improve the information provided, Rand will assess its usefulness.

DOD said that its nonconcurrence with some of our findings and recommendations stemmed from a disagreement with our premise that a direct relationship exists, or should exist, between the Army's training management system and its unit status reporting system. At the same time, however, DOD said that it agreed that better linkages between unit training activity and readiness reporting systems need to be developed. Moreover, it said that because of the inability of current methods to capture this relationship as accurately as desirable, it is sponsoring research aimed at improving DOD capabilities in this area. In our view, the question of whether the relationship between the two systems is direct or indirect is not really salient. Clearly, DOD agrees that a relationship does exist. The difference of opinion is one of degree—we believe that the relationship should be greater; DOD recognizes that there is a relationship but believes that the matter requires further study.

In commenting on the exclusion of some mission-essential tasks from the external evaluations of home-station training, DOD said that other essential tasks are evaluated at other times in a unit's training program. We
agree, but the fact remains that units are evaluated externally by their higher command only about once every 18 months, and this evaluation does not cover some mission-essential tasks.
Evaluations of Army National Guard units' training provide even less reliable information to higher commands than do active Army home-station evaluations. These evaluations are also based on training often conducted under unrealistic conditions and, likewise, are not focused on mission-essential tasks. Furthermore, the evaluations are not fully reviewed by higher commands and, because they must be completed before the end of annual training periods, cover only a portion of the training conducted. As a result, the evaluations provide only general and sometimes conflicting information. Accordingly, National Guard training evaluations (1) cannot be considered reliable indexes of units' training proficiency, (2) do not provide reliable information for training readiness assessments, and (3) are not useful to commanders for planning future training.

Evaluations Are Based on Training That Does Not Adequately Simulate Combat Conditions

Evaluations of National Guard units' training do not provide reliable information to higher commands primarily because they are based on training that does not adequately simulate wartime conditions.

Annual training affords National Guard units the best—and for many units the only—opportunity to accomplish sustained mission training under realistic conditions as envisioned by Army doctrine. During these periods, units spend at least 7 days in a tactical field environment to approximate wartime conditions.

In the past, reserve component units have had difficulty providing sufficiently realistic training, and that difficulty appears to have continued. In June 1989 we reported that reserve component units had not conducted training under realistic conditions during their annual training periods.\(^1\) Our observations during this review showed that training realism has not improved significantly since that time.

Training realism at the units we visited had four major deficiencies:

- shortages of authorized equipment (including chemical alarms and decontamination kits, chemical protection masks, night-vision goggles, radios);
- lack of challenging, realistic training missions (night missions and missions involving an opposing force);

\(^1\)Army Training: Management Initiatives Needed to Enhance Reservists' Training (GAO/NSIAD 89-140, June 1989).
failure to integrate combat arms, combat support, and combat service support elements; and
inability to conduct planned training because of inadequate support by host installations.

The effect of these deficiencies on the units' ability to conduct realistic training in some tasks was substantial. For example, one infantry battalion could not conduct most NBC tasks because it had no chemical alarms or decontamination kits and not all soldiers had protective suits. In all, the unit lacked 60 percent of its authorized NBC equipment. Moreover, neither of the two infantry battalions we visited conducted tactical training at night. And another battalion could not conduct realistic training in defensive tasks since no opposing force was available.

Failure of the host installation to provide necessary munitions or advance notice of training restrictions severely limited some training. For example, a host installation did not provide promised munitions or advance notice that firing ranges would be closed. In one instance, an attack aviation battalion scheduled to fire 18 antitank missiles received only 2 usable missiles from the host installation. According to unit officials, the other 16 missiles had exceeded their shelf life. As a result, most of this battalion's helicopter crews will not be able to train in handling, loading, and firing live weapons for at least another year. Similarly, an infantry battalion received only 19 of the 60 TOW missiles it had requested to conduct live-fire training.

At this same installation an engineer company could not perform such basic mission tasks as preparing tank ditches and vehicle fighting positions because of environmental restrictions on excavations. According to a unit official, the host installation did not inform them of a requirement to give 14 days notice for inspection before any digging could take place on the installation.
Unlike their active counterparts, National Guard units are evaluated under the ARTEP program only once every 4 years. In the interim, the most significant evaluation of unit proficiency in mission-essential tasks is the Army Forces Command Report 1-R performed during each unit's annual 2-week training period. This report, however, is of limited value because it covers only a portion of the training conducted and provides only general and sometimes conflicting information.

In 1988, the Army completed an in-depth study of training in the reserve components. One of the many issues addressed was the evaluation of collective training. The study concluded the following:

"The [reserve component] lacks a standard unit assessment methodology. A variety of assessment methods are used to evaluate a unit's operational capability, none of which provide a reliable and valid assessment to gaining CINC [Commander in Chief] of the operational capability and deployability status of their [reserve component] forces. The three major assessment tools are the [unit status report], FORSCOM [Forces Command] Report 1-R, and Mobilization Assessment Team validation."

As a result of this study, the Army is developing a new assessment strategy for the reserve components known as the Force Assessment Model. This model, which is scheduled for implementation in October 1991 pending satisfactory completion of pilot testing, will require unit commanders to periodically make self-assessments of their unit's proficiency throughout the year to supplement the annual 1-R evaluations. The Army expects that the self-assessments will enable commanders to identify proficiency trends based on real-time information. Nevertheless, the accuracy and completeness of unit proficiency information will still be largely dependent on the 1-R evaluations, since these evaluations cover the most intense training periods for most units.

We analyzed the 1-R evaluations prepared for six National Guard battalions during each unit's annual training period in 1990.2 Our analysis confirms that yearly evaluations of reserve unit proficiency do not always provide the units or their wartime commands with valid information. Yet the 1-R reports may be the only evaluations available to commanders to complete unit readiness reports.

We requested 1-R reports for all 10 reserve component units that were evaluated. However, four units did not provide them to us.
Evaluations Based on Limited Observations

The amount of time evaluators spent observing the National Guard’s annual training was limited. The units that we visited were in the field from 7 to 9 days, but the evaluators spent only about half of each day making observations. Evaluators did, however, observe major training events and conduct after-action reviews.

Army policy requires that evaluators provide reserve commanders with a written assessment before the unit leaves the installation. Apparently the deadline pressure to complete the 1-R reports dictated the evaluation period. Evaluators told us that they returned from the field at night to document their observations. The evaluators for most of the units completed their 1-R reports by the end of the first week of the 2-week training period.

Other duties also interfered with the amount of time evaluators spent observing training. The commander of a transportation company that conducted annual training in Europe told us that the unit saw its evaluator only once during the entire 2-week period. According to the commander, the evaluator was an active Army officer who had his own company to run, so the evaluation was an additional duty.

Evaluations Provide General and Conflicting Information

Army regulation requires that reserve component evaluations cover certain fundamental tasks (core requirements) in addition to mission-essential tasks. Core requirements address 13 areas that the Army considers fundamental to a unit’s training program, such as establishing and maintaining effective communications, conducting training focused on wartime mission requirements, and demonstrating the ability to conduct operations in an NBC environment. Evaluations should inform reserve commanders of their units’ strengths and weaknesses in core requirements and mission-essential tasks accomplished during the training period. As with active units, performance of core requirements and mission-essential tasks for reserve units are evaluated as either “trained,” “needs practice,” or “untrained.”

Our analysis of 1-R reports for six National Guard battalions showed that the reports sometimes contained conflicting information, thus raising questions about the accuracy of the ratings. In other cases, the evaluations provided only general information and did not address many of the units’ mission-essential tasks.

One infantry battalion was evaluated as “trained” in the core requirement “realistic training.” Yet this battalion did not perform tactical
training at night, did not conduct realistic NBC training, and did not incorporate combat support or combat service support elements. The same unit was evaluated as “needing practice” for “proficiency in common tasks.” But, according to the evaluator’s written comments, some of the unit’s soldiers had not brought protective masks and suits. Also, the unit had not performed masking/unmasking and decontamination procedures or properly camouflaged vehicles during exercises. Given the criteria and the evaluator’s comments, it appears that an “untrained” evaluation might have been more appropriate.

Other examples of 1-R reports containing conflicting information included a second infantry battalion, a support battalion, and an engineer company. The infantry battalion was rated as “trained” in the core requirement “understanding staff functions,” which involves normal day-to-day coordination with higher, adjacent, subordinate, and supporting elements to accomplish an assigned mission. However, the evaluator’s comments—such as “tactical interface with brigade headquarters was virtually non-existent” and “coordination with higher and adjacent units remains untrained”—indicate that the unit should have been rated lower. The support battalion’s evaluation stated that command and control was effective, but it also said that the employment and control of units by certain battalion elements (the S1, S4, and command sergeant major) needed training emphasis.

This same 1-R report contained other conflicting statements. An evaluator wrote that the battalion performed well in a tactical environment, but his comments also revealed that under tactical conditions some soldiers wore fluorescent sunglasses and used white tape around tents and parking areas.

The engineer company’s 1-R report had similar problems. One of the tasks, “conduct NBC operations,” was evaluated as “needing training” even though the soldiers did not know how to put on their NBC masks or suits. In fact, some soldiers had not even brought their protective suits with them. An evaluation of “untrained” would seem to have been more appropriate. (Just before this annual training period, the unit commander had assessed his unit as untrained in this task.)

In other instances, evaluator comments were too general to provide useful information and did not address many mission-essential tasks. For example, in one evaluation the evaluator provided no comments on most of the unit’s mission-essential tasks and only general comments on other tasks. For two mission-essential tasks, “perform hasty river/gap
crossing" and "perform air assault," the evaluator commented only that "numerous air movement operations were conducted as well as river crossing and live-fire exercises." In the case of the engineer company, evaluator comments did not address five of its nine mission-essential tasks.

In another case, the comments appeared to be based on personal opinion rather than observation. The unit was evaluated as "needing practice" in the core requirement "effective command and control." Yet, in support of this evaluation, the evaluator wrote the following:

"Battalion staff, even though not currently properly staffed, needs to practice on tactical planning and integration of fire support. With continued practice and development, the coordinating staff will be excellent planners."

This kind of evaluation, as well as others that provide only general information, does not provide sufficient information about units' strengths and weaknesses—information needed by commanders to formulate training plans that will maintain their units' strengths and correct weaknesses.

There is little or no review of the narrative information contained in 1-R evaluations by either peacetime or wartime chains of command. Officials from Forces Command headquarters; the Office of the Chief of Army Reserve; and Headquarters, Second U.S. Army, told us that they generally review only the assigned ratings (such as "trained" or "untrained") for core requirements and mission-essential tasks. Narrative evaluations are rarely reviewed. These officials said that they rely upon the chief evaluator at each training site to review narrative comments for completeness and quality. This decentralized review process may help to explain why some evaluations provided general and conflicting information.

Other Impediments

We found other conditions that impaired training evaluations. For example, there may have been too few evaluators to observe battalion-level exercises. Only four evaluators observed training for one infantry battalion of over 300 soldiers. The battalion commander told us that this was not a sufficient number of evaluators to adequately evaluate the unit's training. Similarly, the commander of a maintenance battalion told us that the three-man evaluation team assigned to his unit was too small to conduct a thorough evaluation.
In another instance, the professional background of the evaluators limited the advice they could give. Evaluators observing a nonmechanized infantry battalion had a background in mechanized infantry operations. According to the battalion commander of the evaluated unit, some solutions to training problems suggested by the evaluations were not useful because they were based on mechanized operations.

Conclusions

The Army's system for evaluating the proficiency of National Guard units does not provide reliable information to the unit evaluated and to higher commands. This is because the evaluations have been based primarily on only limited observations of training that often has been conducted under unrealistic conditions. Moreover, the evaluations have not always focused on the performance of mission-essential tasks. Consequently, commanders lack accurate and complete data to guide them in (1) planning unit training to correct weaknesses and to maintain strengths and (2) assessing their units' combat readiness. Since 1-R evaluations may be the only information external to the unit available to commanders to complete unit readiness reports, these reports, too, are not likely to be valid.

Although a number of actions can be taken to improve training evaluations, none will have a significant impact until the training that is evaluated is conducted under more realistic conditions. While there are impediments to conducting realistic training at host installations' facilities, much more can be done to simulate wartime conditions, for example, conducting night missions, missions involving opposing forces, and missions integrating combat arms, combat support, and combat service support. If training evaluations are to be meaningful, realistic training for National Guard units should rank high among the Army's priorities. In addition, allowing more time for evaluators to complete their written evaluation results would increase the amount of time available for observing training and probably improve the evaluations' quality. Evaluation quality might also be improved over time by a review process at higher command levels.

Recommendations

We recommend that the Secretary of the Army ensure that more realistic training is provided to National Guard units during annual training periods. One way to achieve this might be to assign responsibility and hold host installation commanders accountable for providing a realistic training environment.
We also recommend that the Secretary take the following actions:

- Eliminate the requirement that evaluators provide commanders written evaluation results before the end of annual training. Eliminating this requirement would increase the amount of time that evaluators can spend making training observations and providing training advice. If this is not feasible, the Secretary should require that the chain of command monitor the preparation of written evaluations to ensure that they are completed in accordance with Army policy.
- Focus evaluations on demonstrated proficiency in mission-essential tasks.
- Require the National Guard units' higher command or the commands they will be assigned to in wartime to review completed 1-R evaluations to ensure their adequacy and completeness.

Agency Comments and Our Evaluation

In commenting on our first recommendation, DOD said that both active and reserve component commanders must be held accountable for providing a realistic training environment. It pointed out, however, that the role of installation commanders is to support reserve component training within the limits of their capabilities and resources. We agree that installation commanders should not be expected to provide resources beyond their capabilities and do not believe that our recommendation implies otherwise.

DOD did not agree with our recommendation that the Secretary of the Army eliminate the requirement for evaluators to prepare written evaluation results before the end of annual training. DOD cited the need for commanders and evaluators to discuss specifics of the training assessment and its impact on future training. We agree with the necessity for discussion; in fact, timely discussion of the evaluator's observations may be even more important than the written evaluation itself. But we do not believe that meaningful discussion must be predicated on a written evaluation. DOD further commented that our finding that some units' evaluations were not based on the entire training period was not Army policy or normal practice. We agree that this condition is not a reflection of Army policy; nevertheless, it was normal practice among the units that we observed, and in our view, this practice is not likely to change without some action on the Army's part. DOD continues to believe that it is feasible for evaluators to complete their formal evaluations prior to the reserve units' departure from annual training. Although we remain doubtful that such evaluations will be comprehensive, we have
expanded our recommendation to emphasize the Army's responsibility to ensure compliance with its policies.

Concerning our recommendation that evaluations be focused on assessing proficiency in mission-essential tasks, DOD said that the annual training evaluation covers only the tasks completed at annual training, not all mission-essential tasks. We agree; but the point of our finding and recommendation is that many National Guard units performed mission-essential tasks that were not evaluated, and therefore, evaluations should be refocused.

Concerning our last recommendation, DOD said that the Army's system provides for ample review and distribution of reserve component training assessments. While there may be ample opportunity for review, the fact is that reviews were not made. Our work clearly shows that DOD's conclusion that all is well based on the mere fact that policies are in place is not well founded. If policies are to be effective, they must be adequately implemented.
## Appendix I

### Examples of Variances Between Proficiency Assessments for a Field Artillery Battalion

<table>
<thead>
<tr>
<th>Mission-essential task/subtask</th>
<th>Unit commander's assessment</th>
<th>CTC proficiency comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command and control operations field artillery</td>
<td>Trained</td>
<td>Days 1-3, General Support Day/Night Defense in Sector (Live Fire) Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>There was little or no preparation for the mission.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The situation map was carelessly prepared; it established no fire order standards,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>did not contain friendly unit locations, and did not track fire unit availability.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The target list and the plan were poorly disseminated to the firing units, causing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>confusion and lack of understanding.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The tactical operations center did not coordinate all movements and routes with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>maneuver units. Therefore, unit movements were reactive instead of well-timed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>During this exercise, the battalion fire direction center experienced severe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>communication problems, resulting in degradation of fire support.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Day 11, Forward Passage of Lines/Movement to Contact/Hasty Defense/Hasty Attack Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The battalion was late in directing the battery’s repositioning, and three platoons</td>
</tr>
<tr>
<td></td>
<td></td>
<td>were lost to the opposing force’s direct fire.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days 13-14, Deliberate attack</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The fire plan to cover the attack contingencies was complicated and incomplete.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Necessary target information was late.</td>
</tr>
<tr>
<td>Maintain tactical communication</td>
<td>Needs practice</td>
<td>Day 11, Forward Passage of Lines/Movement to Contact/Hasty Defense/Hasty Attack Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Observer positions were not known and communication with observers was sporadic.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Batteries were overrun by the enemy, causing significant losses of fire power and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>command and control.</td>
</tr>
<tr>
<td>Provide fire support in sector (live fire) mission</td>
<td>Trained</td>
<td>Days 1-3, General Support Day/Night Defense</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fire during the day was poorly executed. Tactical fire control was not well executed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Firing unit status was unknown and the fire plan was incomplete.</td>
</tr>
</tbody>
</table>

(continued)
### Appendix I
Examples of Variances Between Proficiency Assessments for a Field Artillery Battalion

<table>
<thead>
<tr>
<th>Mission-essential task/subtask</th>
<th>Unit commander's assessment</th>
<th>CTC proficiency comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Days 13-14, Deliberate Attack Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Information needed to have a workable fire plan in effect was not available.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Smoke fire at the beginning of the mission fell behind the opposing force.</td>
</tr>
<tr>
<td>A scatterable mines mission was fired at the wrong time and in the wrong location.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix II

Examples of Variances Between Proficiency Assessments for a Light Infantry Battalion

<table>
<thead>
<tr>
<th>Mission-essential task/subtask</th>
<th>Unit commander's assessment</th>
<th>CTC proficiency comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assault</td>
<td>Needs practice</td>
<td>Days 1-3, Conduct a Search and Attack Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>There was a lack of aggressiveness in the execution of the mission, reaction to enemy contact was piecemeal, and the leader's intent for this mission was not understood by command two levels higher. Fire support was not integrated into the maneuver plan.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When the unit was required to conduct movement to contact during conditions of limited visibility, breaks in contact, loss of command and control, and inability to react to contact were common. Formations rapidly lost all dispersion and interval. Front, rear, and flank security were lost, and the units moved exclusively in file formation. Soldiers did not observe noise and light discipline, and it was apparent that the unit was unfamiliar with moving at night over uneven terrain. Some platoons got lost for over 12 to 18 hours.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>During low-intensity operations, the task force suffered 95 casualties, of which 33 died of wounds and 9 were a result of fratricide.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days 3-6, Conduct a Search and Attack Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Key leader casualties caused confusion between Companies A and B when no direct contact was made with the new leaders.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The task force suffered 276 casualties; 43 died of wounds and 40 were the result of fratricide.</td>
</tr>
<tr>
<td>Attack/counterattack by fire</td>
<td>Needs practice</td>
<td>Days 9-11, Conduct a Deliberate Attack</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A simple yet detailed plan was not developed, and actions on the objective were not synchronized. Leaders were not in control of the battle, and individual movement techniques were unsatisfactory, resulting in a failure to achieve the commander's objective.</td>
</tr>
</tbody>
</table>

(continued)
### Examples of Variances Between Proficiency Assessments for a Light Infantry Battalion

<table>
<thead>
<tr>
<th>Mission-essential task/subtask</th>
<th>Unit commander's assessment</th>
<th>CTC proficiency comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform air assault</td>
<td>Trained</td>
<td>Days 9-11, Conduct a Deliberate Attack Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>An air assault force landed in the wrong location and suffered fratricide.</td>
</tr>
<tr>
<td>Defend</td>
<td>Needs practice</td>
<td>Days 6-9, Conduct Defense Mission</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The obstacle plan was not fully integrated with ground tactical and fire support plans.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The unit was slow to move into sector and begin preparing positions and obstacles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The task force did not completely destroy the enemy's reconnaissance. Although the enemy vehicles were stuck in the mud or destroyed by mines, several enemy reconnaissance elements were able to continue through the sector on foot.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All attack helicopters were destroyed by enemy missiles and ground fire.</td>
</tr>
<tr>
<td>Perform nuclear, biological,</td>
<td>Needs practice</td>
<td>The task force suffered a total of 194 casualties, of which 20 died of wounds and 17 were the result of fratricide.</td>
</tr>
<tr>
<td>chemical operations</td>
<td></td>
<td>The unit received adequate information indicating attacks, but no precautions were taken.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When hit with a persistent chemical agent, large amounts of equipment and supplies were contaminated.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Many soldiers did not properly mask or conduct individual decontamination when hit with a persistent chemical agent. This lack of proficiency resulted in a high number of casualties.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The inability of the unit to locate and establish a decontamination point delayed the operation for two hours as units waited to be decontaminated.</td>
</tr>
</tbody>
</table>
Appendix III

Major Contributors to This Report

National Security and International Affairs Division, Washington, D.C.

Henry L. Hinton, Associate Director
Charles J. Bonanno, Assistant Director

Norfolk Regional Office

Ray S. Carroll, Jr., Evaluator-in-Charge
Lester L. Ward, Site Senior
Oried E. Graves, Site Senior
Mary Jo Moody, Evaluator
Orders must be prepaid by check or money order made out to the Superintendent of Documents.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

$2.00 each

The first five copies of each report are free. Additional copies are $2.00 each.

Telephone 202-274-0241

Gaithersburg, Maryland 20877

Post Office Box 6012