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ARMY NATIONAL GUARD AVIATOR TRAINING REQUIREMENTS --  
TASK SATURATED

BY

COLONEL RONALD B. STEWART

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The Army National Guard aviation program has grown from the "Flying Club" days of the Sixties to a highly trained, complex, professional and combat ready Total Force of the Nineties. The requirements of the Army National Guard aviator are the same as those of the active component aviator. These requirements increase every year. The ARNG aviator has limited training opportunities as a part-time aviator. The majority of ARNG aviators are professionals in their civilian career and spend between 50-60 hours per week in their civilian jobs. The stress of fast-paced civilian jobs, commitments to the family and community, and the task requirements as an ARNG aviator have reached the saturation point. The National Guard leadership cannot continue to expect the ARNG aviator to continue to accept any more requirements. The average ARNG aviator is required to fly between 100 to 130 hours per year, complete numerous check rides, and be proficient in all modes of flying. This highly professional aviator is required to fly under both visual and instrument flight rules, nap of the earth, night vision goggles, drug interdiction and next--air-to-air tactics. How much should one ask of this part-time aviator? How can the Army National Guard maintain a dependable, combat ready aviation force which is proficient and deployable without task overload? Can this aviator meet all requirements safely? This study will address these questions and suggest some answers. It will provide the reader with some eye-opening requirements which the ARNG aviator must complete each year. Conclusions and recommendations may lead to improvements in the ARNG aviation program.

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ARMY NATIONAL GUARD AVIATOR TRAINING REQUIREMENTS - TASK  
SATURATED

AN INDIVIDUAL STUDY PROJECT

by

Colonel Ronald B. Stewart

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Project Adviser

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Carlisle Barracks, Pennsylvania 17013  
27 March 1990

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ABSTRACT

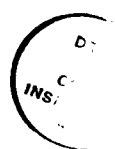
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# ARMY NATIONAL GUARD AVIATOR TRAINING REQUIREMENTS - TASK

## SATURATED

### CHAPTER I

#### INTRODUCTION

Army National Guard (ARNG) aviation is a part of the overall Department of Defense Total Force Policy. Since the end of the Vietnam War the requirements of Army aviation have increased significantly. During the Vietnam era, pilots completed helicopter flight training with approximately 200 hours of flight training. All these flight hours were dedicated to the very basic flying skills. Aviators were trained to fly helicopters only under visual flight rules (VFR), which meant they were not qualified or experienced to fly under instrument flight rules (IFR). Pilots were given some basic instruction on how to fly under IFR conditions and were issued a tactical instrument ticket, to be used only if pilots inadvertently flew into clouds.

Pilots were also trained in basic combat tactics. These tactics were based on Vietnam tactics, which did not allow the pilot to fly at low altitudes. The majority of the flying was conducted above 1,500 feet above the surface of the terrain. The flight training program in the 1960s was designed to produce pilots who were fairly proficient in basic flying skills, which were sufficient to enter combat in Vietnam, where the pilots could continue to hone their skills.

During the early 1970s and the latter years of Vietnam, it became apparent that flight tactics needed to change. The enemy

began to use radar guided weapons and missiles. To avoid these threats, the pilot had to learn to fly low to the terrain to avoid the new threat. The flight training program had to be changed to teach these new tactics, called nap-of-the-earth (NOE) flying. This began an era of increased demands on Army aviation programs. The evolution has continued right to the present. Today's pilots still receive approximately 200 hours of flight training, but this training is divided into many different areas. Army pilots are now qualified upon graduation to fly helicopters VFR, IFR, NOE and Night Vision Goggles (NVG). Pilots are trained to fly both day and night in all types of weather. They must meet many very demanding and difficult annual training requirements, which continue to increase every year. The ARNG aviator is required to meet the same annual requirements as the active duty aviator--but with constrained training opportunities.

The ARNG aviation program has grown from a program in the Sixties--known as the "flying club"--to what is today--a strong, combat-ready force ready to deploy at a moment's notice. ARNG aviation units must remain in a high state of readiness because they are part of the Department of Defense Total Force Policy. Implementation of this DOD policy in 1973 changed the ARNG aviation program from a back-up organization to the Active Army, to a full partner in the Army's national defense effort. Total Force policy dictates that national defense needs be met through increased reliance on military reserve forces. In accordance with Total Force Policy, the ARNG has received more aviation force structure, and supporting resources have been allocated to the

ARNG. Increased reliance on ARNG aviation has brought more aircraft, more training facilities, and dramatic increases in training requirements. As a result, increased training requirements, with no additional training opportunities, have created increased stress on the ability of part-time ARNG aviators to keep up with requirements.<sup>1</sup>

The ARNG aviation leadership made an attempt to study the ARNG aviators situation to determine if they were task-saturated. This study was completed in 1986. It led to an increase in the available training opportunities for each ARNG aviator.<sup>2</sup> But this study failed to consider the stress factor on part-time ARNG aviators; it did not ascertain just how much time was physically available to meet the demands of the ever-increasing ARNG aviation program.

This research paper will examine the current ARNG training requirements and the stress factors which influence the part-time aviators. It will attempt to determine if the current ARNG aviation program is task-saturated. The paper will include recommendations about how ARNG leaders may be able to improve aviation unit combat readiness through more effective management of aviator training requirements.

## ENDNOTES

1. Kenneth D. Rhoades, COL, Stress/Fatigue and the ARNG Aviator.  
P. ii.
2. Sandra M. Szabo, John W. Ruffner, Kenneth D. Cross, and  
Michael G. Sanders, An Evaluation of the Training Requirements of  
Army National Guard Aviators, Phase I: Analysis of Questionnaire  
Data, pp. 1-153.

## CHAPTER II

### TRAINING REQUIREMENTS

The Army National Guard (ARNG) aviator is unique to the reserve component system and the Army Aviation program. The ARNG aviator is required by Army Regulations (AR) to meet the same training standards, the same Annual Proficiency and Readiness Test (APART) and the same annual flight minimums as the active duty aviator. In addition to the federal requirements of the ARs, National Guard Regulations (NGR) supplement the requirements of the ARs. There are also individual State requirements as dictated by the National Guard military structure of the state in which the aviator is a member. Just within the past few years, ARNG aviators have also been required to perform drug support missions for state and federal governments. To better appreciate these requirements and the amount of time demanded of ARNG aviators, we must take a detailed look at the requirements themselves.

#### FEDERAL REQUIREMENTS

##### Army Regulation 95-1

This regulation covers aircraft operations, crew requirements, and flight rules for all Army aircraft systems and persons involved in the operations of such aircraft and systems. It applies to the Army, the Army National Guard and the U.S. Army Reserve. This regulation requires the use of aircraft operator manuals and checklists, which are the primary references for

operation of a specific aircraft. It also requires the use of Aircrew Training Manuals (ATM), Field Manuals (FM), Field Circulars (FC), Technical Manuals (TM), and Training Circulars (TC). The specifics of these manuals will be covered later.

AR 95-1 requires each aviator to successfully complete periodic hands-on performance tests:

a. An annual standardization flight evaluation: This consists of visual flight maneuvers and procedures conducted in each aircraft mission, type, and design in which an aviator is required to operate. This evaluation must be conducted using the guidance in the appropriate ATM.<sup>1</sup> The ATM requires the evaluation to be conducted in four phases. Phase 1, the evaluator reviews the examinee's records to verify that the examinee meets all prerequisites for the evaluation and ensures that the examinee has all required equipment for the flight. Phase 2 is an oral examination where the examinee must demonstrate a working knowledge and understanding of all appropriate regulations and publications, operating limitations and restrictions of the aircraft operator's manual, aircraft emergency procedures, aeromedical factors, aerodynamics, tactical and mission tasks, and night tasks. The evaluator is required to select two topics from each of the above subject areas and require the examinee display his knowledge through the oral examination. Phase 3 is the flight evaluation phase; it consists of a briefing, preflight inspection and engine-start and run-up procedures, flight tasks, and engine shutdown and after-landing tasks. Phase 4 is the debriefing, when the evaluator critiques the examinee's

performance. The entire evaluation will normally take four hours to complete.<sup>2</sup>

b. An annual instrument flight evaluation: This is similar to the standardization flight evaluation. But this evaluation examines the aviator's ability to fly the aircraft under instrument flight rules (IFR). The annual evaluation also requires approximately four hours.<sup>3</sup>

#### TC 1-210

AR 95-1 requires all aircrew training to be conducted in accordance with the Aircrew Training Program (ATP). This program is covered in detail in TC 1-210, Aircrew Training Program/Commander's Guide. This publication is the aviation commander's guide for implementing the ATP. TC 1-210 adds some additional annual requirements for the aviator:

a. An annual Night Vision Goggle (NVG) standardization flight evaluation: This is similar to the above two evaluations. But this evaluation is conducted at night using night vision goggles to fly VFR under tactical conditions. This evaluation normally takes three hours.

b. An Army Aviation Annual Written Examination (AAWE). The aviator must correctly answer at least 80 percent of the fifty questions on the examination. It covers all areas of aircraft performance, tactics, threat identification and regulations. Aviation branch is the only branch which requires this annual examination which normally takes four hours. There are no other branches within the Army which require any type of annual

proficiency test to revalidate the officer's ability to perform branch requirements.

c. An annual aircraft operator's manual written examination: This examination is also a fifty question examination on which the aviator must score a grade of at least 70 percent correct. This open book examination covers all chapters of the aircraft operator's manual.

d. Unit mission tasks: The unit commander must develop mission training programs which emphasize tasks that are unique to the unit's operational mission, Army training and evaluation program (ARTEP), and geographical area. Proficiency in mission-related tasks is the goal of mission training. Commanders must assign sufficient flight hours to mission training to achieve that goal. During mission training, a crew member does not have minimum hour, task, iteration, or APART requirements in the aircraft in which the training is being conducted. Unit mission task requirements are designated only by the unit commander and AR 95-1. The commander must certify annually on DA Form 759 that each aviator has or has not completed ATP requirements. The reason or reasons for not completing the requirements must be annotated.<sup>4</sup>

#### AIRCREW TRAINING MANUALS

The aviation unit commander is required to use the Aircrew Training Manual (ATM) as a guide for establishing aviator qualification, refresher, mission, and continuation training programs. The ATM is an integral part of the commander's ATP. Twelve separate TCs and FCs make up this program. Each TC and FC

covers a separate aircraft. The ATMs are basic documents which standardize aviator training programs and flight evaluation procedures. The standardization of requirements, procedures, and practices ensures that standard techniques and procedures will be used in everyday flying. By using the ATMs, the commander can ensure that individual aviator proficiency is matched with the unit's mission.<sup>5</sup> These manuals add considerably to aviator requirements and vary according to the type of aircraft to be flown. For example, TC 1-211 applies to aviators required to fly the UH-1 utility helicopter and requires each aviator semiannually or annually to:

a. Fly 48 hours from a crew position with access to the controls (Flight Activity Category One--FAC 1).

b. Fly for 9 hours night or day vision goggle (NVG or DVG), of which a minimum of 4 hours must be flown in the aircraft at night from a crew position with access to the controls (NVG designated position).

c. Complete one iteration of 40 different base tasks during day and one iteration of 14 different night tasks.

d. Complete one iteration of the 8 base tasks in the NBC mode while wearing MOPP gear.

e. Complete required iterations of special and additional tasks as established by the commander, such as sling load operations, rappelling, water bucket operations, etc.<sup>6</sup>

#### AR 40-501

Annually each aviator is required to complete a flight physical. This is a detailed physical and must be approved by the

Aeromedical Center, Fort Rucker, Alabama.<sup>7</sup> This physical normally requires at least 4 hours.

### NATIONAL GUARD BUREAU REQUIREMENTS

#### NGR 95-3

In addition to the active duty requirements for aviators, National Guard Bureau (NGB) requires each aviator to fly a Synthetic Flight Training System (SFTS) at least once annually. The number of hours required depends on the minimum distance aviators must travel from their state Army Aviation Support Facility (AASF) to the SFTS facility. The hourly requirement is discretionary for individuals required to travel over 201 miles, six hours for individuals who travel 101-200 miles, and twelve hours for those that must travel 100 miles or less.<sup>8</sup>

#### NGR 95-210

Annually, each aviator is required to fly 18 hours of night training as part of their total flying hour program.<sup>9</sup>

### STATE REQUIREMENTS

#### SPECIAL MISSION TASKS

Each state has unique requirements which require special training. These requirements vary depending on the geography of the state and the type of military units supported within the state. Examples of these special task requirements are:

- a. Helicopter cast and recovery (HELOCAST)
- b. Rapelling
- c. Paradrop
- d. Stability operations (STABO)

- e. Water bucket operations
- f. Drug surveillance/interdiction missions
- g. Aerial radio relay
- h. Medical evacuation
- i. Disaster relief support
- j. Aerial photo missions

The unit commander must designate the number of aviators to train and maintain proficiency in the special mission tasks. Those designated aviators must have a specific task identified as a special mission task on the commander's task list (CTL). The commander will designate the prescribed training for qualification, the number of iterations of each special task required annually and the currency requirements for each aviator.<sup>10</sup>

As can be seen, aviators must meet many training requirements. The amount of time, while somewhat standardized, can vary significantly among aviators. A typical flight period lasts approximately 1.5 hours. The individual aviator usually needs four hours to complete one flight period. The non flight time is required for mission briefing, flight planning, crew briefing, pre-flight inspection, post-flight inspection and debriefing. This does not include travel time to and from the AASF.

These training requirements have continued to increase over the years. In the Sixties, an aviator was required to fly a helicopter under VFR rules only. The aviator was trained in basic tactics and had minimal training in IFR conditions. During the Seventies, all aviators were required to become instrument qualified, nap-of-the-earth flight qualified and unaided night

qualified. The Eighties brought such requirements as NVG qualification with increased tactical requirements. The Nineties will bring additional qualification training in air-to-air tactics and new, more complex aircraft qualifications. All this has evolved with little increase in the training time available to the ARNG aviator.

The total training time available to the ARNG aviator is very limited. There are 48 unit training assemblies (UTA) available each fiscal year for the aviation unit to train as a unit. A UTA is a four hour training period. Normally the unit conducts a Multiple Unit Training Assembly (MUTA) one weekend per month. This provides twelve weekends per fiscal year for unit training. An additional 15 day annual training (AT) period is conducted each fiscal year for the aviation unit to train as a unit and support other military units.<sup>11</sup> In addition to UTAs and AT periods, each ARNG aviator is authorized Additional Flight Training Periods (AFTP). The number of AFTPs authorized depends on the type of primary aircraft the individual aviator is assigned to fly. The minimum number is 24 AFTPs for a utility airplane pilot to 48 AFTPs for attack helicopter and scout helicopter pilots.<sup>12</sup> Due to budget constraints, unfortunately all ARNG aviators are restricted to 18 AFTPs for FAC 2 aviators and 24 AFTPs for FAC 1 aviators during FY90.

AFTPs enable aviators to accomplish individual and crew training, thereby allowing more time for collective training during UTAs, MUTAs, and AT. AFTPs are normally used to accomplish all components of the APART. UTAs and MUTAs are used to emphasize

collective training tasks in accordance with appropriate unit Army Training and Evaluation Program (ARTEP) and mobilization mission training requirements. AT periods emphasize combined arms training, presenting a threat-oriented, tactical scenario for the aviator.

In summary, the ARNG aviator has a total of 63 paid training days per fiscal year to complete all requirements. For a UH-1 helicopter pilot, the total requirement is to fly 96 flight hours, complete a minimum of four separate checkrides, the AAWE, an operator's manual written examination, complete all iterations of individual base/collective/unit mission/special tasks, SFTS requirements, night minimums and a flight physical. To date, these requirements have been accomplished. But to what level of proficiency? It has required the majority of the training time just to meet the minimum requirements, leaving little time to develop higher proficiency in any one area.

To provide some relief to aviator over-tasking, Department of the Army and National Guard leadership should acknowledge the fact that the ARNG aviator has reached the task saturation point. Then, most positive restructuring of requirements must take place if the ARNG aviation program is to retain the professional aviators it currently has and to continue to train in a safe manner to meet standards. One solution would be to have all aviators receive initial qualification in all required tasks, with only a small percent remaining current in designated tasks. This would create specialists in areas such as NOE, NVG, drug interdiction or air-to-air tactics. These specialists would be

the experts in particular tasks and would provide the cadre base for expansion under mobilization.

With increased warning times for mobilization, ARNG aviators would have time during pre and post mobilization to become current in those tasks which could be listed as post mobilization "currency" requirements for individual aviators. This policy would allow for a much lighter stress load on the part-time ARNG aviator and provide a much higher degree of proficiency in specialized tasks.

## ENDNOTES

1. U.S. Department of the Army, Army Regulation 95-1, p.8.
2. U.S. Department of the Army, Training Circular 1-211, pp.7.2-7.7.
3. AR 95-1, p.8.
4. U.S. Department of the Army, Training Circular 1-210, pp. 3.4-3.5.
5. Ibid., p. 1.2.
6. TC 1-211, pp. 5.1-5.7.
7. U.S. Department of the Army, Army Regulation 40-501, p. 24.
8. U.S. Department of the Army, National Guard Regulation 95-3, p. 4.1.
9. U.S. Department of the Army, National Guard Regulation 95-210, p. 2.4
10. Ibid., pp. 3.15-3.16.
11. Ibid., pp. 2.1-2.2.
12. Ibid., pp. 4.1-4.11.

## CHAPTER III

### TRAINING DETRACTORS

There are numerous detractors to training with which both the active and National Guard aviator must contend. The active duty aviators simply have more time to dedicate to all requirements. The ARNG aviators have the same training requirements as the active aviator, but much less time in which to conduct the training. John O. Marsh, Jr, Chairman of The Reserve Forces Policy Board, in his 1990 report to the Secretary of Defense, states "The most significant training detractor for reserve component personnel is time available to train."<sup>1</sup> Besides the lack of time available for the ARNG aviator to train, the other main detractor to training is the fact the ARNG aviator has his civilian career. The ARNG aviators focus more on their civilian career than on their military duties. The majority of time available to ARNG members is devoted to their civilian job. A few days each month must be set aside for the ARNG members to focus on their National Guard job. This chapter will address the military impacts of this pursuit of a dual career. We will look at some of the known detractors to training which interfere with the ARNG aviator and observe how this impacts the overall readiness of ARNG aviation units.

## CIVILIAN CAREER REQUIREMENTS

Every ARNG aviator has a civilian career; this provides the primary source of income. This is where the guard member must put most of his or her concentration and dedication. In an attempt to determine just how big a problem this situation really was, the Aviation Division of the National Guard Bureau employed the services of the Army Research Institute Aviation Research and Development Activity (ARIARDA), located at Fort Rucker, Alabama. ARIARDA conducted a nationwide questionnaire survey of ARNG aviators. This survey took two years to complete and was published in November 1986.<sup>2</sup> It constituted the first phase of a research effort designed to determine if aviators in the ARNG need additional time to meet their current aviation training requirements. The survey provided information about the demographic characteristics and career intentions of ARNG aviators, their perceptions of the adequacy of the training requirements and the training time, their willingness to spend additional time to meet the training requirements, and their perceptions of obstacles to training requirements.<sup>3</sup> It was hoped that the information would prove useful for long term ARNG aviator force management and planning. This survey identified and recognized all the facts outlined in chapter I. The Original Statement of Work (SOW) provided by the National Guard Bureau to the Army Research Institute (ARI) defined the research objective as follows:

The objective of this research effort is to fully analyze the viability of an Army National Guard (ARNG) aviator meeting all current training requirements. The research effort should establish an identifiable relationship between the requirements for an ARNG aviator and the maximum time available to accomplish these tasks<sup>4</sup>

The survey represented approximately 75% of the total ARNG aviator force, 3,640 aviators. Since 1985 the total ARNG aviator population has grown to approximately 6,500 aviators. The ages of the aviators in the total sample ranged from 20 to 60 years, with a median of 36.7 years. Half of the aviators were between 34 and 39 years of age.<sup>5</sup> The figures as of December 1989 show only 13.3% of the aviators between 34 and 39 years but 54% are 40 or older. Currently 32.7% of the aviator force is between 20 and 33 years of age.<sup>6</sup> These figures show the majority of the ARNG aviators are in age groups with well established civilian careers.

Data on the civilian educational level achieved by the aviators showed the educational level of the ARNG aviators to be relatively high. Ninety-four percent of the aviators reported education beyond the high school or trade school level. Fifty-five percent have a bachelor degree or higher; an additional 10% have an associate degree. Eighty-four percent of the aviators are married (only 8% are divorced). Ninety-two percent are employed full-time; an additional 4% are employed part-time. Approximately 12% are self-employed. The majority of the aviators reported civilian occupational titles that belong to the professional, technical, or managerial occupational categories. The median number of hours spent on the civilian job each week was reported to be 50 hours. Only 5% reported that they spend less than 40

hours a week on their job; 27% reported that they spend 60 hours or more a week at their job.<sup>7</sup>

The educational and occupational levels of ARNG aviators correlate with their reported salary levels. Specifically, fifty-five percent of the aviators earn \$30,000 or more from their civilian job alone. In comparison, the median personal income from the job for professional/technical workers in the general population was approximately \$23,000 as reported by the U.S. Department of Commerce in 1985.<sup>8</sup>

Commuting distances and times show a median distance that the aviators travel from work to the facility at which they conduct their UTA/MUTAs is 47.9 miles; the median commuting time is 60.0 minutes. The median distance that the aviators travel from home to the UTA/MUTA site is 38.2 miles; the median commuting time from home is 50.0 minutes. Approximately one-half (54%) of the aviators have civilian jobs requiring them to travel overnight. The median number of nights that these aviators are required to be away from home is 3.5 per month.<sup>9</sup>

This survey portrays the typical ARNG aviator as being educated, motivated, professional and highly experienced. These are the type of individuals the ARNG needs in order to maintain a well trained, ready aviation force. But the major problem with the civilian professional is simply the amount of time they are able to devote to their ARNG aviation duties. At what point do the individuals become pressured to make the choice between their civilian career and their devotion to the National Guard? As these professionals mature in both their civilian and military

careers, there must be a trade-off or sacrifice between their civilian job and the increasing training requirements of the ARNG aviation program. The successful professional also brings another detractor to training--the stress and fatigue created by ARNG task-saturation and the everyday stress and fatigue associated with a successful civilian career. It is common for ARNG aviators to be attending night school to further their civilian education. In addition to all the requirements of ARNG aviators, the demands of the family must be addressed. Time must be devoted to the wife and children if the family is to remain together.

#### STRESS/FATIGUE

The problem of stress in work organizations has received considerable attention during recent years. Many studies have examined relationships among poor health, work performance, organizational effectiveness, increased job absenteeism, and accidents.<sup>10</sup> Yet, despite current recognition of stress as a critical aspect of organizational effectiveness, little effort has been made to relate current knowledge to the situation faced by the ARNG aviator.

Stress is a term often associated with personnel problems. However, it is really a term from the physical sciences, where it describes a force or pressure exerted on a part or parts of a physical or mechanical structure. By analogy, the term has become commonplace in discussions of the psychological pressures individuals face within and outside the workplace. Most of the

stresses we all face are part of normal living. But when stress exceeds a person's ability to withstand it, and it detracts from or systemically interferes with job performance, it presents serious performance problems.<sup>11</sup> Obviously, overstressing aviators can have particularly serious consequences.

Stress and fatigue may be categorized as acute or chronic. Acute stress is intense in nature and occurs within a short time and leads to acute fatigue. Chronic stress, on the other hand, is not as intense but can persist for months or years. Chronic stress coupled with periods of acute stress can seriously weaken a pilot's ability to operate an aircraft safely. Stress produces both physical and mental fatigue, the latter being the more serious problem for aviators, because pilots are less likely to recognize mental fatigue.<sup>12</sup>

Daily routines and responsibilities, both on and off the job, are often the cause for the buildup of stress on an individual. The Army has a specific definition of stress: the bodily response to life events. Further, the Army classifies stress into two categories: environmental and self-imposed. Those stresses over which we have little control are called "environmental", and those over which we have control are termed "self-imposed" stresses.<sup>13</sup>

Any event, pleasant or unpleasant, that we are exposed to may produce stress. Merely as a result of living, people are stressed, which results in wear and tear on the human mind and body. The ARNG aviator's environment presents some common stressors: emotional, such as worry about being able to meet

requirements or procrastination in completing requirements; noise from Army aircraft; change in the training requirements; and dissatisfaction with the ARNG.

The daily civilian job and family life also produce regular stresses. These stresses build throughout the days and weeks and are carried over to the ARNG environment. The ARI study specified the amount of time spent on the civilian job each week and the amount of travel time to and from work and the place of ARNG training. Just the length of the average civilian duty day for the typical ARNG aviator exceeds the duty day instructions set forth in the crew rest policies of the ARNG unit. Stress buildup is usually insidious, and the crew members are unaware of the real problem until illness sets in or they are involved in an accident.

Army National Guard aviators are not just pilots. Many are unit commanders, section leaders, planners, and supervisors of various activities. For the ARNG aviator to succeed in the aviation environment, he must be rested and mentally alert. In addition, aviators should have some ability to influence their work environment. The National Guard leadership should do all they can to eliminate unnecessary stress from ARNG aviation.

The success of the ARNG aviation program may depend on National Guard leaders being able to identify and minimize aviation program stressors. To provide ARNG aviators who can meet all active duty training performance standards is a difficult, but not impossible, task. To complete the Total Force Army aviation mission, ARNG aviation training time must be scheduled

and used in an efficient way that maximizes training opportunity, yet minimizes the stress on program participants. If stress is not minimized, ARNG aviators may prematurely quit the program and new volunteers may become difficult to recruit. For ARNG aviation to be capable of accomplishing its wartime mission, a careful distribution must be maintained between effective, realistic training and an environment that creates needless administrative stress.

#### NON-AVIATION TRAINING REQUIREMENTS

As a unit member, the ARNG aviator has numerous annual training and administrative requirements. For every hour required to fulfill these non-flying requirements, an hour is not available to the aviators to complete their flying requirements. Examples of these non-aviation training requirements include: unit inspections, annual records review, required physicals and shots, annual briefing, formal reviews and parades, required civil disturbance training, and annual conferences. If the aviator has a civilian work conflict or personal problem on any given UTA/MUTA, missed training must be made up. In making up the missed training, the individual might miss important collective unit training opportunities.

The ARNG aviator must meet the same military educational requirements as the active duty aviator. These requirements for a commissioned aviator include Officer Basic Course, Officer Advanced Course, and Command and General Staff College. Warrant

Officers must complete graduate level aviation training and qualification courses, Warrant Officer Advanced Course, and Warrant Officer Senior Course. If these courses are not completed, the officers are not promoted and may not be retained in the ARNG. These requirements, for the most part, can be accomplished through correspondence courses or through U.S. Army Reserve (USAR) schools. However they maybe completed, they detract time from the already over-tasked aviator. The ARI study concluded that an insufficient amount of personal time is the major obstacle that the ARNG aviator encounters in meeting additional military requirements, such as military education.<sup>14</sup>

The three most important reasons listed in the ARI study for the ARNG aviator joining and staying in the National Guard are opportunity to fly, pay, and retirement benefits. Loss of flight status is the single most important reason cited for aviators leaving the ARNG. Four of the five remaining most frequently cited reasons for possibly leaving the ARNG reflect a concern about insufficient time for meeting the training requirements: unrealistic training goals for time/resources available, administrative details/politics, insufficient time to maintain proficiency, and conflict with civilian job.<sup>15</sup>

The median total number of flight hours for the ARNG aviator is 2,000 hours; 55% of the aviators accumulated some of these hours in a combat environment.<sup>16</sup> It can be assumed that, if the current amount of allocated training time is insufficient for the present force, it is likely to be even more inadequate for the younger, less experienced aviators currently entering the ARNG.

The problem will be compounded by the addition of still more training requirements expected for the future, such as air-to-air combat training and AH-64 and UH-60 transition training.

Finally, it should be noted that the opportunity to fly is the single most important motive for the ARNG aviators' decisions to be a part of the ARNG; furthermore, loss of flight status is the most important reason for possibly leaving the ARNG. Thus, despite the fact that the aviators' stated career intentions indicate that they are strongly committed to the ARNG, any factor that prevents the aviator from flying becomes a potentially critical issue for long term retention.<sup>17</sup>

## ENDNOTES

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15. Ibid., p. 148.
16. Ibid., p. 149.
17. Ibid., p. 151.

## CHAPTER IV

### SAFETY CONSIDERATIONS

Army National Guard aviation units comprise thirty-three percent of today's Total Army (Active, ARNG, U.S. Army Reserve) aviation program. In a national emergency, ARNG aviation is scheduled to be mobilized and used along with active component aviation; no other force structure choice exists. Increased reliance on ARNG aviation has brought more equipment, more training facilities and dramatic increases in individual aviator training requirements. Moreover, national defense responsibilities for ARNG aviation is increasing with the addition of new equipment and reorganized aviation force structure. Since the reorganization of ARNG aviation units under the Army of Excellence (AoE) force structure in 1986, the ARNG aviation program has grown to 283 units with over 6,500 aviators.<sup>1</sup> During this same growth period, the ARNG aviation program has had to face safety issues which increase the degree of risk in the program. Some of these additional problems will be addressed in this chapter in an effort to fully define the magnitude of the task of maintaining a ready ARNG aviation force.

#### TASK SATURATION

The main goal of the ARNG is to be prepared to provide combat ready military units in the event of a national emergency.

As seen in Chapter I, today's ARNG aviation program demands that individual aviators maintain proficiency in such areas as terrain flight, instrument , and night vision goggles. The same aviator must also be proficient in his assigned aircraft specialties, such as aero scout or aerial gunnery. Once the above tasks are mastered, the ARNG aviator is required to develop and maintain an understanding of his duties and ability to work as part of a unit combat team. For long term military career development, all aviators must also meet military education requirements, which require attendance at active army schools or the completion of correspondence courses. Membership in the ARNG aviation program is a part-time job with stressful full-time requirements.

The ARNG aviators simply do not have time available to meet all of the their ARNG requirements. Without some relief, the ARNG leadership is creating potential safety risks. These risks can and should be reduced to avoid the possibility of aircraft accidents. One way to reduce risk would be to restrict the aviators who have additional requirements to "co-pilot only" duties and to waive their proficiency and flight requirements.

Aviation commanders, platoon leaders, and other key leaders have nearly the same flight proficiency requirements as other unit pilots. Aviation units are manned with the assumption that their commanding officers, executive officers, supply and maintenance officers, and other key support officers will be in operational flying position and meet the same general requirements as do other unit aviators.

To reduce environmental stress and improve aviation unit training, additional aviator tasks could be eliminated for key personnel. Restricting these aviators from operating as "pilot in command" might be necessary, but this could be done in a manner that does not reduce unit combat readiness or increase personnel requirements. These aviators would still be in charge of unit activities. Instead of meeting current standards, they would be required to fly with a fully qualified pilot. They could spend the bulk of their time performing leadership related tasks. Current regulations provide for a reduction in flying hours and flight tasks requirements for these key personnel.<sup>2</sup> But the provisions of these regulations do not provide sufficient relief.

#### FULL-TIME SUPPORT

To make combat readiness achievable for reserve component aviation, each National Guard unit is assigned limited full-time training and administrative personnel. However, day-to-day aviation maintenance and individual aviator training are carried out through support supplied by Army Aviation Support Facilities (AASF).<sup>3</sup> ARNG aviators meet their individual aviation training requirements through an AASF program of paid training periods; these are designated Additional Flight Training Periods (AFTP). Coordinated efforts between supported units and the AASF enables ARNG training to meet Active Force standards. Tactical units plan training, and the AASF provide the resources and personnel needed to conduct daily flight activities.

However, the full-time technician manning has not kept up with the increase of aviation units and aviators under the AoE expansion. There has not been any growth in the full-time manning of the AASF. Thus increased training and maintenance requirements for the increased aircraft assigned to the new aviation units has placed a strain on the AASF's ability to meet the demand. Current ARNG Modified Tables of Allowances (MTOE) for aviation units allow aircraft to be filled at only the 80% level. Aviators are authorized to be filled at 125% level. This does not provide the total required aircraft for the full complement of aviators assigned to the units. This shortfall requires that a smaller number of assigned aircraft fly at a higher Operating Tempo (OPTEMPO). The combined shortage of full-time maintenance personnel at the AASF and the high OPTEMPO has created another problem in safety. There must be a trade-off between the aviator training requirements and the operational readiness level of the aircraft. Army Leadership must recognize the fact that you cannot support 100% training with only 80% of the equipment and 75% of the required support personnel. Either the training requirements for the aviators must be reduced, or the aircraft and support personnel must be filled at 100%. Failure to do this will result in low readiness levels of ARNG aviation units because of insufficient individual aviator training and low aircraft availability rates.

## ARNG AIRCRAFT

Many ARNG aviators are faced with practicing current military tactics in obsolete aircraft that should not be deployed in combat. These obsolete aircraft cannot accomplish the mission required in combat and will not survive in a high threat combat environment. For example, approximately 347 of the ARNG's 795 observation helicopters and 120 of the 567 attack helicopters are obsolete.<sup>4</sup> Current aviation training doctrine is based on active duty aircraft, which are state-of-the art. ARNG aircraft cannot perform the same missions as the new active duty aircraft due to the age and old technology of the ARNG aircraft. Training to current doctrine with obsolete aircraft is unrealistic. Flying old ARNG aircraft assigned to unrealistic missions, ARNG aviators may well question the reason for training to Active Army standards. When the mission clearly cannot be carried out with available aircraft, what is the purpose of training to fight as if the modern replacement aircraft will suddenly arrive the day the war starts? The current Army Aviation Modernization Plan (AAMP) does not provide sufficient aircraft to fill all MTOE requirements of the ARNG aviation units with new aircraft. It may prove hard to build unit combat readiness and individual aviator morale when everyone knows that, because of obsolete aircraft, they cannot train as they have to fight. The Army must address the total requirements for aircraft modernization. The AAMP needs to consider the needs of the reserve components. The Total Force

needs to be modernized in order to provide the units with the airframes needed to mobilize and fight the first battle. Anything less will create an inability of ARNG aviation units to provide the tactical combat mission support required in the future.

#### CREW ENDURANCE

National Guard Regulation 95-1 states that crew endurance will be in accordance with the unit standard operating procedure. This requires that ARNG aviator's civilian occupational duties are to be considered.<sup>5</sup> The unit crew endurance program imposes limits in the interest of improved mental and physical readiness of aviation crew members. Benefits depend on the individual's proper use of off-duty time to ensure sound physical and mental fitness. ARNG commanders and responsible supervisors cannot be fully and continuously aware of the ability of each aviator to meet the standards imposed by this regulation. ARNG commanders and supervisors have no control or supervision over the civilian duty time of ARNG aviators. It is unrealistic to think each ARNG aviation unit commander or supervisor has the time to manage the crew endurance limits of each aviator due to the wide variety of civilian occupations and schedules of these aviators. Each aviator is required to advise his or her commander or supervisor when approaching or reaching the prescribed limits. A strict application to this regulation is impossible in the ARNG aviation environment. During AFTP flight training, it must be left up to the individual aviator to determine fitness to fly. The ARI study

has identified the fact that the majority of the aviators admit to working over 50 hours per week at their civilian job. Those hours plus the time required to commute to the place of training from home or place of civilian employment puts the aviator close to crew endurance limits every time he or she arrives to fly. If the training flight is to be a NVG flight, it is easy to see that crew endurance may be exceeded prior to the end of the training period. It is unlikely that the aviator is going to drive 50-60 minutes to the training site and then admit to his commander or supervisor that he or she is beyond crew endurance and not be able to fly. As we have seen in Chapter III, the task load along with the probability of exceeding crew endurance limits create safety hazards. Commanders and supervisors must take a more aggressive role in the crew endurance programs and ensure that the standards for crew endurance are enforced. The individual aviator must be better educated about the effects of stress and fatigue. The individual aviator must face the facts on crew endurance and take corrective measures.

#### AIRCRAFT ACCIDENT PREVENTION

A rational approach to Army Aviation safety policy requires a clear definition of what accident rate is acceptable. Review of Army aircraft accident statistics soon reveals that there are no new causal factors for accidents. In fact, the same old combinations of cause factors are repeated, resulting in new and more costly aircraft accidents. Because the same factors are

repeated and keep causing additional aircraft accidents, Army aviation leaders are under a great deal of pressure to keep accident cause awareness high. All accidents are considered unacceptable. Destruction of equipment, injured or killed personnel, and the resulting failure to accomplish the military mission tarnish the image of a "professional Army", waste valuable resources, and destroy morale.<sup>6</sup>

Aside from using up tax dollars and destroying soldiers' health and lives, accidents can be "tough" on the careers of aviation personnel. No accident is acceptable. Therefore, the Army has dictated that the accident rate will be zero. If an Army aviator, Army aviation unit commander, or section leader wants unfavorable attention, all he needs is some involvement in an aircraft accident. This "pressure from the top" down, in fact, results in a great deal of stress for the individual members of the Army aviation community. Careers can be made or lost depending on the accident record of the individual aviator or aviation leader.

The majority of the safety considerations can be corrected by efforts from the aviation leadership in both active and National Guard. No one individual can change the aviation environment. Change must be a joint effort with support from the "top down".

## ENDNOTES

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4. Departments of the Army and Air Force, National Guard Bureau, Army Aviation Modernization Plan Implementation, Washington: 5 February 1990.
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6. U.S. Department of the Army, Army Regulation 40-5, September 1974, Section 3.

## CHAPTER V

### CONCLUSION

The Department of Defense Total Force policy makes ARNG aviation force structure critical to achieving the national security objectives of the United States. Reduction of aviator tasks may be the key to increased aviator retention, job performance, mission readiness, stress and fatigue reduction and, most important, accident prevention. As Army National Guard aviation training requirements are increasing, Vietnam aviators are retiring and as the ARNG continues to depend on volunteers, a minimum stress environment for ARNG pilots will be increasingly important. The long-term success of ARNG aviation may depend on how well military leaders can control the task load of the aviators.

The increased reliance on the ARNG as part of the Total Force Policy assures the Guard will be activated at the outbreak of a war. The success of the Total Force aviation program depends on committed combat-ready ARNG aviators. Every effort should be taken to guarantee that ARNG aviators are physically and mentally prepared for combat.

Task saturation which results in stressed aviators may be a significant deterrent to Total Force aviation readiness. The part-time all-volunteer Army National Guard aviation force must be able to participate in well planned, professionally supervised training programs. Full-time ARNG personnel must be able to support the requirements of part-time ARNG aviators. This can be

accomplished by good planning, proper manning levels, modern equipment and effective Active Army participation in the ARNG aviation program.

National Guard aviation has the potential to be a combat ready, cost effective military force. In order for the ARNG to maintain its aviator strength and its aviation combat readiness, long term retention of aviators is critical. Decreasing unnecessary training requirements, updating or replacing obsolete aircraft, coupled with professional well-planned training will likely result in a combat ready ARNG. Professional management and support of the part-time aviator is essential to this task.

#### RECOMMENDATIONS

1. Reduce task requirements for all aviators through creating task specialists. (NVG specialist, NOE specialist, Instrument specialist, etc)

2. Reduce the annual flight time requirements of all aviators in key unit positions so as to provide the necessary time to perform their duties and responsibilities under less stressful conditions.

3. Restrict key personnel enrolled in military education programs to co-pilot duties and waive their flight training requirements.

4. Issue newer aircraft or update non-mission capable aircraft and fill to 100% of unit requirements, and/or change the mission of units with obsolete aircraft.

5. Increase the full-time manning at the AASF in order to support the aircraft maintenance requirements of the ARNG aviation program.

6. Implement the physical readiness test for all members of the National Guard aviation units and increase screening of aviators over forty years old in order to maintain physically fit ARNG aviators.

7. Educate commanders and aviators on the effects of stress and methods of reducing stress.

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