

JOINT NUCLEAR OPERATIONS AND TARGETING COURSE

Standardized Training For Nuclear Target Analysts

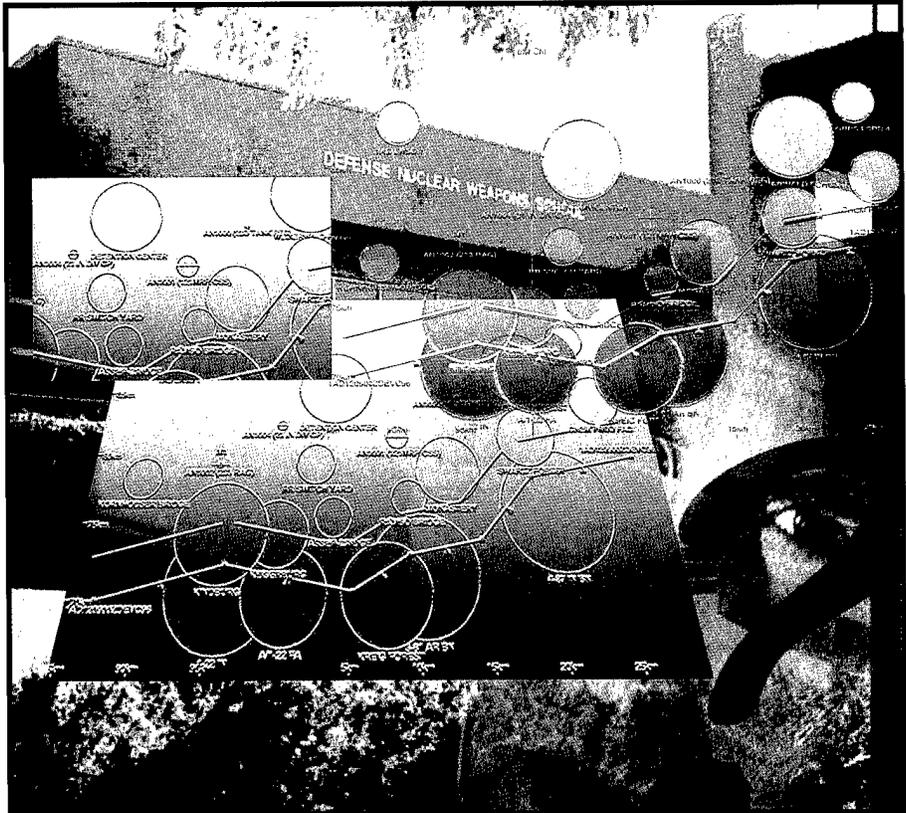
LTC James H. Cockle, FA

Nuclear Weapons Officer

The reorganization of responsibilities for offensive nuclear warfare (see related article in this issue) resulted in a myriad of changes for Army and Joint nuclear planners. The Army no longer has the mission of nuclear weapon delivery, but plays an important supporting role in nuclear target analysis for weapons delivered by other Services. Theater nuclear warfare is inherently joint in nature. It is critical that Army nuclear target analysts and their joint counterparts use standardized tactics, techniques, and procedures (TTP) in this area. The best way to ensure uniformity is through training. The Joint Nuclear Operations and Targeting Course (JNOTC) has been recently established at the Defense Nuclear Weapons School (DNWS) located at Kirtland Air Force Base, Albuquerque, New Mexico, to meet this requirement.

Army Nuclear Target Analyst Training

For many years, the U.S. Army Field Artillery School (USAFAS) trained Army nuclear target analysts with the Nuclear and Chemical Target Analysis Course (NCTAC). This was later shortened to the Nuclear Target Analysis Course (NTAC) when the U.S. renounced use of chemical weapons. The U.S. Army Chemical School (USACMLS) also taught these courses and continues to teach NTAC to all Chemical Advanced



Course students. Successful completion of NTAC results in the award of Skill Identifier/Additional Skill Identifier (SI/ASI) 5H (Nuclear Target Analyst). Following the end of the Cold War and the disestablishment of Army nuclear weapons delivery capability, interest in training Army nuclear target analysts waned. The USACMLS continued to teach NTAC as a part of the Chemical Advanced Course, and USAFAS offered NTAC as an optional, separate course. NTAC enrollment at Fort Sill was almost entirely limited to reserve component officers whose 5H positions were no longer valid. The USACMLS produced large numbers of officers with SI 5H, but very few chemical jobs were

coded for 5H requirements. Most positions coded as 5H were concentrated in nuclear-capable field artillery units; units that no longer had nuclear missions. Training was based on Field Manual (FM) 101-31-1, Nuclear Weapons Employment Doctrine and Procedures, and FM 101-31-2, Nuclear Weapons Employment Effects Data, both largely obsolete due to the elimination of many tactical nuclear weapon systems. The Army's nuclear doctrine, promulgated then in FM 100-30, Nuclear Operations, focused on a tactical nuclear war in central Europe with the Soviet Union; a nation that no longer existed. From a training viewpoint, the Army was teaching the wrong soldiers

a skill that they did not require using obsolete TTP. Then things changed.

New Joint Offensive Nuclear Doctrine

In the mid 1990's, the Joint Staff published a series of doctrinal publications on offensive nuclear warfare. Based on this doctrine, the Army rewrote FM 100-30 to reflect more accurately post-Cold War nuclear requirements. New joint nuclear doctrine, promulgated in the 3-12 series of joint publications, redefined joint and individual Service responsibilities. The Army once again had a critical role in offensive theater nuclear operations. The Army's revised role concentrated on troop safety, obstacle avoidance, preclusion of collateral damage, nuclear target analysis and target nomination, and integration of nuclear and conventional fires. The Joint Staff directed the U.S. Army Nuclear and Chemical Agency (USANCA) to update the FM 101-31 series manuals to reflect joint requirements. This resulted in the development and release of Joint Publication (Joint Pub) 3-12.2, Nuclear Weapons Employment Effects Data, in 1995. It is similar to the old FM, but has simplified computational procedures, contains more sophisticated effects data and, most importantly, includes every nuclear weapon in the U.S. active stockpile database, not just "tactical" nuclear weapons. Joint doctrine requires the use of Joint Pub 3-12.2 by all U.S. nuclear target analysts. USAFAS updated its NTAC using Joint Pub 3-12.2 and exported it to the USACMLS where it remains a part of the Chemical Officer Advanced Course.

The development of the revised NTAC brought USAFAS a new

customer: US Strategic Command (USSTRATCOM). With the addition of joint personnel in the NTAC student base, USANCA explored the possibility of developing a joint course that would better suit the needs of the new NTAC customers, but still meet Army 5H requirements. Such a course would have the advantages of Joint/Army standardization and economy of scale, since there were as many (or more) joint students attending the USAFAS NTAC as Army students. The Defense Special Weapons Agency (DSWA) agreed to establish a new course to meet Army 5H requirements and the theater nuclear planning responsibilities of joint organizations. The Defense Nuclear Weapons School, a part of DSWA, was selected to teach the new course, entitled the Joint Nuclear Operations and Targeting Course (JNOTC).

JNOTC

JNOTC curriculum was jointly developed by USANCA, DSWA, DNWS and USAFAS and is taught at DNWS. It is a one-week course designed to train staff nuclear planners in the concepts of nuclear operations, nuclear weapons effects, nuclear targeting considerations, and technical instruction on the mechanics of nuclear target analysis found in Joint Pub 3-12.2. Students must pass a comprehensive written examination and participate in an end-of-course practical exercise to graduate. DNWS, USANCA, and USSTRATCOM provide instructors. After successfully completing JNOTC, students can analyze the effects of friendly nuclear weapons use on ground operations, perform nuclear target nomination procedures, and make informed nuclear weapons employment

recommendations to their commanders. The target audience for JNOTC is those personnel (officers, warrant officers, enlisted, and civilians) whose duties require nuclear target analysis skills. The JNOTC course outline is shown on page 21. Organizations requiring these skills include, but are not limited to, the following:

- *Army Corps*
- *Army Echelons Above Corps (EAC)*
- *Theater CINCs*
- *Service Components of Theater CINCs*
- *USSTRATCOM*
- *The Joint Staff*
- *Joint and Service Modeling and Simulation Agencies*
- *DSWA/DNWS*
- *SHAPE/NATO*

JNOTC Information

JNOTC is taught at DNWS three to four times annually. The next class is scheduled for 13-17 July 1998. There is no charge for this instruction with the exception of individual temporary duty costs. Students require a Secret Clearance with access to U.S. Restricted Data. Army personnel requiring 5H certification must attend JNOTC, as USAFAS no longer maintains its NTAC course at Fort Sill, although USACMLS continues to teach NTAC to its advanced course students. If interested in attending JNOTC, you must request a student quota through your service training system, or call the DNWS registrar at (505) 846-9168, D S N 2 4 6 - 9 1 6 8 , e m a i l dnws@fc.dswa.mil.

Joint Nuclear Operations And Targeting Course

DAY ONE

Welcome and Introduction to JNOTC, DNWS Administrative Items
Nuclear Physics and Weapons Effects
Nuclear Policy, Strategy, and Forces
Theater-level Nuclear Employment
Theater-level Nuclear Targeting
U.S. Nuclear Stockpile and Weapons Characteristics
Nuclear Weapons Display Area Tour (Atomic Museum)
Probabilities and Concepts of Damage Estimation

DAY TWO (Joint Pub 3-12.2)

Introduction to Nuclear Targeting
Damage Estimation Technique Selection
Use of Comparable Target Table
Use of Equivalent Target Area Conversion Nomograph
Visual Method of Damage Estimation
Index Method of Damage Estimation
Numerical Method of Damage Estimation for Area Targets

DAY THREE (Joint Pub 3-12.2)

Numerical Method of Damage Estimation for Point Targets
Desired Ground Zero Selection for Multiple Targets
Poststrike Analysis
Preclusion Oriented Target Analysis
Special Calculations
Joint Pub 3-12.2 Practical Exercise and Examination Overview

DAY FOUR

Written Examination
Examination Review
Strategic Targeting and Execution
Introduction to Automated Targeting Tools
Battlefield Nuclear Targeting Program Practical Exercise
Introduction to Group Exercise
Group Exercise Part One (Peace)

DAY FIVE

Group Exercise Part Two (War)
Course Critique
Graduation