
Tactical Exercise Planning Handbook

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Battelle Columbus Division

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Commission**

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Tactical Exercise Planning Handbook

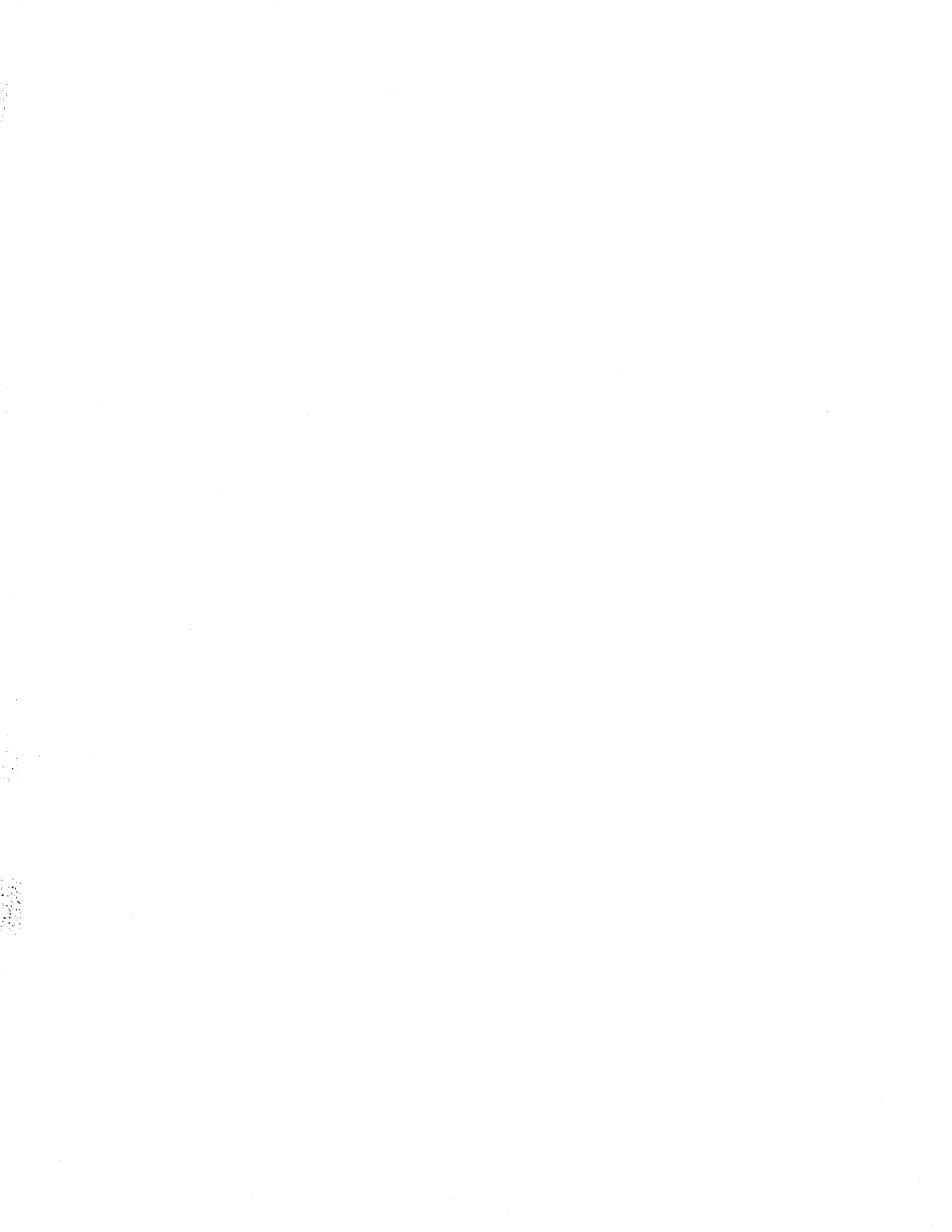
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ABSTRACT

This Handbook provides guidance for the development, conduct, evaluation, and critique of security force tactical response exercises. Background information pertinent to the development of the Handbook and the intent of rulemaking that revises 10 CFR Part 73 to require tactical response exercises is provided. Step-by-step instructions on exercise development, conduct, evaluation, and critique are furnished to assist licensees in meeting regulatory requirements. Needs and resource requirements estimates are addressed in terms of personnel, staff-hours, equipment, weapons, and ammunition. Appendices provide examples of all documents required to plan, conduct, critique, and evaluate the exercises.

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ABBREVIATIONS, ACRONYMS, AND INITIALISMS

CAS	Central Alarm Station
CCTV	Closed Circuit Television
DOE	U.S. Department of Energy
EECP	Entry and Exit Control Point
FOF	Force-on-Force
Kg	Kilogram
LAW	Light Anti-Tank Weapon
LLEA	Local Law Enforcement Agency
LSPE	Limited Scope Performance Exercise
MAA	Material Access Area
MILES	Multiple Integrated Laser Engagement Systems
NRC	U.S. Nuclear Regulatory Commission
PIDAS	Perimeter Intrusion Detection and Assessment System
SAS	Secondary Alarm Station
SSNM	Strategic Special Nuclear Material
TRT	Tactical Response Team

TACTICAL EXERCISE PLANNING HANDBOOK

EXECUTIVE SUMMARY

Revised portions of 10 CFR Part 73 require, among other things, that U.S. Nuclear Regulatory Commission (NRC) non-reactor licensees possessing formula quantities of strategic special nuclear material (SSNM) conduct security force tactical response exercises to assure the adequacy of security force capabilities. This Handbook, which incorporates guidance from a similar U.S. Department of Energy (DOE) program, was developed to provide assistance to licensees in developing, conducting, and evaluating the exercises and to provide comprehensive guidance in the general factors that should be taken into account when developing security system performance exercises for security force tactical response teams.

To assure that the guidance for conducting tactical response exercises had direct applicability to NRC licensee fuel facilities, visits were made to three licensee sites: Nuclear Fuel Services, Erwin, United Nuclear Corporation, Montville, and Babcock & Wilcox, Lynchburg. Based on site-specific information obtained during these visits, the DOE exercise methodology was modified to suit NRC requirements and licensee needs.

Section 2 covers the scope and intent of the regulatory requirements for security force tactical response exercises and discusses the revised regulations that are pertinent to the guidance provided in the Handbook. Clarification of regulatory intent in the form of answers to specific questions is also found in Section 2.

This Handbook provides a step-by-step approach to developing site-specific scenarios, exercise control plans, and evaluation guidance for the NRC-mandated exercises. An annotated exercise control plan and evaluation guidance section is provided in the text along with resource requirements listings for the various types of exercises. The appendices provide examples of all required exercise documents including an exercise scenario and control plan, rules of conduct, a safety plan, an exercise preparation checklist, exercise briefing lesson plans, an evaluator checklist, a controller comment sheet, and a participant critique sheet.

1. INTRODUCTION

1.1 Background

The U.S. Nuclear Regulatory Commission (NRC) has amended 10 CFR 73.46 for Category I fuel facilities to include, among other changes, requirements which address:

- Establishment of security force Tactical Response Teams (TRTs)
- Increased tactical training
- Development of an overall performance testing plan by licensees
- Conduct of periodic security force tactical response exercises
- Conduct of an NRC-observed security force tactical response exercise.

The amendments were directed by the Commission following a joint comparability review of safeguards programs at NRC and U.S. Department of Energy (DOE) fuel facilities.

These changes require that affected licensees conduct security force tactical response exercises, which are intended to provide the security force the opportunity for practice in performing response procedures and are not to be viewed in terms of a pass or fail rating. One exercise, to be observed by the NRC on an annual basis, is also required at each site. These exercises are designed to provide realistic training, and to ascertain whether additional training or security system improvements are required.

Periodic exercises should be of brief duration, include one exercise per security force shift, and, during the course of a year, be conducted during both day and night conditions. A number of these exercises will involve force-on-force (FOF) scenarios. The NRC shall observe one FOF exercise each year. The other periodic exercises may simulate adversary actions and are referred to as limited scope performance exercises (LSPEs).

1.2 Purpose and Scope

This Handbook provides uniform guidance and identifies essential criteria for constructing scenarios for use by NRC licensees of Category I fuel facilities in complying with the revised requirements of 10 CFR 73.46 for security force training and system performance evaluation through security force tactical response exercises. It also provides information on resources, equipment, personnel training, and other needs and requirements pertinent to the successful execution of these exercises. Emphasis is placed on guidance to assure the safety of personnel and continuity of plant operations during the exercises.

The Handbook is designed to assist licensees in developing and conducting exercises required by the revised rule, establishing evaluation criteria for assessing performance of security systems during the exercises, and identifying tactical training needs for security program enhancements.

1.3 Limitations

The Handbook is intended to be a comprehensive guide. However, its use should not restrict licensees in developing exercises, particularly with respect to site-specific concerns and safety.

Site-specific scenarios and their supporting control plans and evaluation criteria are dependent on accurate and current information on physical security configurations (e.g., alarms, barriers), guard procedures, and weaponry. The general guidance provided must be used in conjunction with these and other site-specific concerns to develop effective exercises.

1.4 Methodology

To reasonably assure NRC/DOE comparability, while tailoring guidance to specific licensee needs, this Handbook was developed in distinct stages. First, DOE exercise preparation and conduct methodologies were reviewed to obtain a general understanding of how exercises have evolved in that environment. Second, visits were made to three NRC Category I fuel facilities to understand the environment in which the NRC-mandated exercises are to be conducted. Finally, the data were assimilated into a format suitable for use by licensees.

To capitalize on DOE experience, personnel who were involved in the original development of the DOE exercise program, and who have remained active in it were selected for this project.

The first exercise scenarios and control plans written for DOE were derived from U.S. Army Operational Readiness Training Tests (ORTTs) and Army Training and Evaluation Programs (ARTEPs) which incorporated the use of Multiple Integrated Laser Engagement Systems (MILES). Over the years, these models have been modified and refined for use by civilian security forces protecting nuclear security interests. Just as the military model was modified for use by DOE, so it has been modified for NRC use. To ensure that the models used were appropriate to NRC licensee needs, site visits followed the sequence indicated below:

- An introductory session was held to define the purposes of the project and answer licensee questions.
- Briefings and tours were conducted to obtain an understanding of facility and security operations.
- Document reviews and interviews were conducted.
- Data were validated through discussions with facility personnel.

Following the site visits, the site-specific information was integrated into the proposed model, and generic guidance and example documents were developed.

1.5 Organization of the Handbook

Section 1 provides a general description of the purposes, background, and methodology, and identifies considerations applicable to the guidance material that follows. Section 2 addresses the scope and intent of the regulatory requirements related to security force tactical response exercises. Sections 3, 4, and 5 deal with general aspects of tactical planning that should be addressed during scenario development; exercise coordination, control, and evaluation; and the conduct and critique of exercises. Section 6 deals with personnel, equipment, training, and other needs and requirements for conducting FOF exercises and LSPEs. Appendices to the report include example documents that can be used by licensees in developing plans for their exercises.

2. SCOPE AND INTENT OF REGULATORY REQUIREMENTS

2.1 General

The NRC has amended its regulations for fuel facilities possessing formula quantities of strategic special nuclear material (SSNM) regarding physical protection and personnel performance. The changes were prompted by a determination that physical protection measures should be enhanced based on reviews of NRC physical security inspection reports, licensing actions, the results of physical security Regulatory Effectiveness Reviews (RERs), and the results of a recent study which compared the NRC's security requirements for protecting SSNM with those of DOE's recently upgraded security program. The findings from the most recent joint NRC/DOE comparability review (1986) indicated that DOE has placed increased emphasis on guard weaponry, training, and tactical response exercises, among other considerations. This Section provides information to assist licensees in understanding the requirements for enhancing security system performance through tactical response exercises set forth in Sections 73.2 and 73.46 of the amendments. The overall intent of the requirements for tactical response exercises is to indicate whether additional training or security system improvements are required and to increase assurance that security force capabilities are effective and comparable to those at DOE facilities. It is also the NRC's intent to assure that these exercises are conducted in a safe manner, do not interfere with maintaining normal security on-site, and do not endanger personnel or interfere with plant operations.

2.2 Discussion

The following subsections discuss the purpose and scope of the requirements of the rulemaking that apply to tactical response exercises and the use of Tactical Response Teams (TRTs).

2.2.1 Definitions: Paragraph 73.2 (new) (Tactical Response Team)

TRT members designated for each shift may perform duties other than response, provided that these duties do not interfere with the ability of each member of the team to immediately respond to safeguards contingencies. TRTs are armed with individually assigned, upgraded weaponry [indicated in Paragraph 10 CFR 73.46(b)(6)] and wear a distinctively different item of uniform from the rest of the security force. The requirement for a TRT replaces the more general requirement for an armed response force. The term "armed response personnel," as defined in 10 CFR 73.2, is replaced by the term "Tactical Response Team" for fixed site non-reactor licensees possessing formula quantities of SSNM.

2.2.2 Fixed Site Physical Protection Systems, Subsystems, Components, and Procedures: Section 73.46

a. Paragraph 73.46(b)(3)(i) (Security Organization)

The revision of this paragraph requires that written procedures detailing duties of the TRT be developed and retained, in conjunction with other requirements for security procedures. Since new responsibilities and duties must be assigned to these personnel, it is the intent of the rulemaking to assure that detailed procedures are written to cover all aspects of TRT operations, including organization, training, weaponry, equipment, tactics, command and control, relationship of tactical response duties to normal assigned duties, relationship to other site security personnel, and any site-specific considerations.

b. Paragraph 73.46(b)(4) (Security Organization)

The revision of this paragraph references the requisite training, equipment, and qualification requirements for members of the TRT, referencing special requirements in Paragraphs 73.46(b)(6) and (b)(7).

c. Paragraphs 73.46(b)(6) and (7) (Security Organization)

Weaponry, and weapons training and qualification requirements are specified for members of the TRT. TRT personnel shall be armed with 9mm semiautomatic pistols and shotguns or individually assigned semiautomatic rifles. The use of a larger caliber rifle (.30 caliber or 7.62mm) carried by at least one member of the TRT provides additional effectiveness against the design basis threat. The decision to require semiautomatic pistols and larger caliber semiautomatic rifles is supported by a number of police upgrades nationwide, in response to recent encounters with adversaries using more sophisticated weapons.

d. Paragraph 73.46(b)(8) (Security Organization)

TRT members are required to successfully complete training in response tactics, in addition to meeting other applicable training requirements of 10 CFR Part 73. Guidance on these training requirements is published separately.

e. Paragraph 73.46(b)(9) (Security Organization)

Tactical response exercises are to be conducted to demonstrate the ability of the security force to perform response and contingency plan responsibilities and demonstrate individual skills in assigned team duties. The exercises are intended to provide the security force the opportunity for practice in performing response procedures and to indicate whether additional training or security system improvements are required.

During the first year of compliance, licensees are required to perform at least one quarterly (at least once every three months) exercise per security force shift. At least half of these quarterly exercises for

each shift should involve FOF scenarios. The remaining exercises may be LSPEs that emphasize response to threat scenarios. The exercises should be of brief duration (two to three hours including preparation and critique) and the scenarios for them should take into account site-specific configurations, weapons, personnel, and necessary training requirements. They should involve only on-site security personnel, be constructed to exercise various segments of the licensee security system over the period of a year, be performed under representative lighting conditions throughout a 24 hour day, and emphasize the direction of future training, as opposed to being viewed as a pass/fail exercise. Beginning with the second year of compliance and thereafter, the frequency of the exercises shall be one per shift every four months, one-third of which are to be FOF.

One of the FOF exercises will be observed by NRC representatives during each year. The NRC-observed exercises may involve off-site response personnel (local law enforcement agencies [LLEA] and other supporting agencies, as prescribed in physical security and safeguards contingency plans). The exercise typically may be four to six hours in duration.

The purposes of the NRC-observed exercises are to determine whether requirements for conducting the exercises are being met in accordance with the regulations, and to provide the NRC an opportunity to evaluate the effectiveness of NRC requirements and guidance related to the tactical response exercise requirement. These observations will assist the NRC in determining whether the requirements for training and exercising security system performance need to be modified. This determination will take place over time, as exercises are conducted, and will not be related directly to a single facility. Exercise design, conduct, control, evaluation, critique, and reporting is the sole responsibility of the licensee. See Section 2.3.3.d for further clarification of the relationship of this requirement to inspection and enforcement concerns.

f. Paragraph 73.46(h)(3) (Contingency and Response Plans and Procedures)

This section revises the requirement to have a minimum of five guards available to fulfill assessment and response requirements, by indicating that these guards must be members of the TRT, and be supported by additional guards as necessary.

2.3 Rationale and Clarification

This section provides further clarification (in question and answer form) of the intent of particular requirements found in the amendments to 10 CFR Part 73 addressed above.

2.3.1 Purpose and Scope: Section 73.1(a) (Threat Statement)

Question: Is there any change in the threat statement and its meaning, as published originally and as discussed in Regulatory Guide 5.61, Section C?

Answer: Yes. 10 CFR 73.1(a)(2)(i)(E) adds consideration of land vehicles used for transporting adversary personnel and their hand-carried equipment to commit a theft. Therefore, transport vehicles should be included in some exercise scenarios. Other portions of the threat statement have not been modified.

2.3.2 Definitions: Section 73.2 (new) Tactical Response Team

Question: Does the rule change the guidance provided in Regulatory Guide 5.61, Section C [relative to 10 CFR 73.46(h)(3)] where it was indicated that armed response personnel (now TRT members) may have other duties?

Answer: No. However, these other duties must not interfere with the ability of TRT members to provide immediate response.

2.3.3 Fixed Site Physical Protection Systems, Subsystems, Components, and Procedures: Section 73.46

a. Paragraph 73.46(b)(9)

Question: Does the rule revise the guidance provided in Regulatory Guide 5.61, Section C [relative to 10 CFR 73.20(b)(3)], where it was stated that the testing program does not imply the need for adversary type testing?

Answer: Yes. It is the intent of the revisions to the rule that scenarios developed for the exercises include individuals who play the role of adversaries.

b. Paragraph 73.46(b)(9)

Question: To what extent is MILES or similar equipment required for the FOF exercises and who is responsible for procuring and funding the use of the equipment?

Answer: Laser enhanced weapons, such as MILES equipment, are not required by regulation, but the guidance recommends that a number of the periodic exercises and the NRC-observed exercises be MILES enhanced and employ FOF scenarios. It is generally assumed

throughout the guidance that MILES equipment will be used to enhance realism since this equipment is the most readily available, most widely used, and the current state-of-the-art. However, other means to make the tactical exercises more realistic, and hence more effective, can be substituted for MILES equipment. Licensees are responsible for funding either the purchase or lease of whatever equipment is used.

c. Paragraph 73.46(b)(9)

Question: Will adversary role players actually scale, go under, or breach barriers, and destroy some equipment?

Answer: They may, within limits and at the discretion of the licensees. If damage to property or physical security equipment is done during an exercise, maintenance and repair should be accomplished immediately following the exercise and compensatory measures should be taken during and immediately following exercise play to assure that security is not degraded.

d. Paragraph 73.46(b)(9)

Question: What is the relationship of the NRC-observed exercises to the NRC's inspection and enforcement responsibilities?

Answer: The purposes of the NRC-observed exercises are discussed in Section 2.2.2.e. Other than determining whether or not the exercises are being accomplished in accordance with regulations, the exercises are not part of the NRC's inspection and enforcement program, and security force and/or security system performance involved in the exercises will not be subject to NRC enforcement action. All other aspects of security performance not directly related to a given exercise are subject to enforcement. The fact that an exercise is being conducted will not relieve the licensee of the responsibility for citable conditions or of its responsibility to report weaknesses that exist, irrespective of whether they are discovered as part of the licensee's activities to comply with exercise requirements. However, elements of security system performance revealed to be weak as a result of the exercises, but which are in accordance with approved security plan commitments, are not subject to NRC citation.

2.3.4 General Concerns

a. Relationship of Exercise Requirements to Use of Force, as Prescribed in 10 CFR 73.46(h)(4)

Question: Will the rule be accompanied by any changes in procedures regarding the use of force?

Answer: Yes. A generic letter is being issued. Further guidance may be published later in conjunction with subsequent rulemaking.

b. Concern for Removal of SSNM through Material Access Area Boundaries and Portals [10 CFR 73.45(e)]

Question: Does the rule revise the guidance published in Regulatory Guide 5.61, Section C, where the major concerns for removal of SSNM through Material Access Area boundaries and portals were discussed?

Answer: No.

c. The Role of Local Law Enforcement Agencies

Question: Does the rulemaking alter 10 CFR 73.46(h) requirements regarding the role of LLEA and are the provisions for LLEA response changed?

Answer: No.

d. Follow-on evaluation directed by the Commission

Question: Are there any particular concerns which will be evaluated after the present physical security upgrades have been in effect?

Answer: Yes. The Commission directed that action be deferred on three items of comparability, pending results of performance testing programs at licensed facilities. It is believed that tactical training, coupled with performance testing, will demonstrate whether or not further action is appropriate for these issues which involve differences between the DOE and NRC approaches to (1) passive delay mechanisms at vaults, (2) the philosophy of using an in-house maintenance program and repair capability, and (3) the need for multiple intrusion detection sensor systems at the protected area boundary.

3. SCENARIO AND EXERCISE CONTROL PLAN DEVELOPMENT GUIDANCE

3.1 General

There are two general motivations for conducting tactical response training. The first is to train and evaluate individual and team tactical skills irrespective of the specific security environment. This training, evaluation, and subsequent retraining do not require complex scenarios or exercises. However, each situation presented must coincide with the tactical duties assigned to security forces during a safeguards contingency.

The second motivation for tactical response training is to train and evaluate individual and team skills in their site-specific security environments. Training and evaluation of this type require highly specific and detailed scenarios to ensure that the exercises provide training in site-specific tactical response skills at the individual and team level. The guidance in this section is designed to assist licensees in developing the necessary site-specific approaches to conducting security force tactical response exercises.

Properly developed exercises should reveal strengths and weaknesses in both physical security systems and the security force training program. Licensees should use the exercises to reveal strengths that can be exploited and weaknesses that need correction.

The use of laser enhanced weapons, such as MILES equipment, in FOF exercises is recommended to achieve a high degree of realism for the exercise participants. Use of MILES equipment is not required, however, and other comparable alternative methods to enhance realism may be used. For the purposes of this document, MILES equipment is used as an example, and Chapter 6, "Needs and Requirements," provides information on the types and quantities of equipment needed for MILES-enhanced exercises. The use of MILES equipment is recommended because it is currently state-of-the-art, the most readily available, and the most widely used weapons fire simulation system for FOF tactical engagement exercises. The use of other equipment now and in the future as new technologies emerge is an acceptable alternative to provide exercise realism.

Both detailed scenarios and Exercise Control Plans should be developed if an exercise is to accomplish its intended goals and assure safety and the security of the plant. This section provides guidance on the preparation of scenarios and Exercise Control Plans (see Appendix C for an example Exercise Control Plan including attendant scenario). The guidance that follows applies to all tactical response exercises required by the rule. Because FOF exercises are more complex, they require the most detailed planning and the guidance in Section 3 should be used to the maximum extent for these exercises. LSPEs are not as complicated; therefore, the planning and control documents developed for these exercises may be scaled down by licensees as long as exercise control, safety, and site security are not adversely affected.

3.1.1 Vulnerability Analysis

The first major step in planning a tactical response exercise is to analyze site vulnerabilities. This step should include an analysis of specific targets and a review of the site's total protective system. The product of a site vulnerability analysis is a complete site target list in order of priority based on attractiveness to the adversary and the difficulties that must be overcome to defeat the protection measures for each target.

A vulnerability analysis conducted prior to exercise planning ensures that the exercise scenarios are based on plausible safeguards contingencies. A wide range of potential scenarios should be considered, but emphasis should be placed on the most plausible scenarios.

Before planning to defeat a threat, an understanding of the threat itself is required. NRC threat guidance defines the design basis threat and its general parameters. Other sources, which discuss the potential characteristics of threats against NRC licensed facilities are identified in the References (Appendix A). This literature should be consulted to understand adversary characteristics so the exercises can accurately portray realistic behavior. These sources provide descriptions of the characteristics of general types or classes of potential adversaries, which should be considered during exercise planning, as applicable to a particular site and its immediate environment. Sites have differing target potentials for various facilities/targets. Similarly, the design basis threat applicable to an entire site may not apply to every potential target area within that site. An armed assault may be the most likely adversary act at some locations, while at other sites covert theft attempts are the most plausible threat. Regardless, each site's most plausible threats should form the basis for initial exercise planning.

The next step in the vulnerability analysis is a specific target analysis. This is accomplished through an overall review of site missions and functions. Consideration should be given to what is used, produced, or stored at the site that would be a likely theft or diversion target and where these materials or matter are located.

Effectively answering target analysis questions creates a list of the site's most plausible targets. The next step is to rank these potential targets according to their attractiveness based on both their usefulness to an adversary and vulnerability to adversary action. Usefulness may include form, configuration, and suitability for conversion into a nuclear device. Ranking requires a thorough review of the entire physical protection system to determine the vulnerability of attractive targets to adversary actions.

This review should take the following factors into account:

- Geography of the site
- Natural barriers

- Non-security-related barriers
- Security-related barriers
- Entrance and egress controls
- Interior and exterior intrusion detection systems
- Central and Secondary Alarm Stations
- Assessment systems [e.g., closed circuit television (CCTV) and guard towers]
- Security force deployment.

A comprehensive list of site targets should be arranged by priority of the attractiveness of each target to potential adversaries. It should be derived from the results of the specific target analysis and a total security system review. Licensee Physical Security and Safeguards Contingency Plans should be consulted for data useful in conducting the vulnerability assessment. The selection of a particular target by an adversary should be based on both the target desirability and the difficulties that must be overcome in achieving theft.

3.1.2 Response and Denial/Containment Planning

Exercises are designed to test specific aspects of licensee Physical Security and Safeguards Contingency Plans aimed at defeating adversary attempts against identified targets. It is recommended that response plans exist as specific plans or as part of licensee implementing procedures to address all targets identified in the vulnerability analysis phase. These plans or procedures can then be used to develop scenarios and exercise control plans to test the effectiveness of response planning. If detailed response plans or procedures do not exist, it is suggested that they be developed before conducting site-specific exercises. This section deals with methods for developing response plans.

Response and containment/denial plans should be written for security force response to plausible adversary actions. A separate plan or procedure should be developed for each target identified during the vulnerability analysis. Each target should be analyzed to determine potential denial of access to or containment of an adversary, in the event that denial fails. Questions to be considered include:

- What essential positions adjacent to the target must be occupied so an adversary can be denied physical access, or so an adversary can be contained and all routes of entry or egress covered by effective observation and weapons fire?
- What essential positions, away from the target, must be occupied to provide a second echelon of denial or containment?

- What routes of egress beyond the facility's protected area boundaries must be covered to minimize an adversary's opportunity to escape, should primary and secondary levels of containment be breached?

After these questions have been answered for a given target, each denial and containment position should be plotted on a site map. Primary and alternate approach routes to each position should also be selected and displayed on the map. The map should then be included in the response plan or procedures.

Each response plan should also address security force deployment. A complete plan will contain detailed instructions specifying where, when, in what order, and for what particular mission(s) specific security elements are to be employed. Although these decisions will be determined to a limited extent by the physical layout and security system at a site, they are generally influenced by a few basic characteristics.

First, upon receipt of an alarm or other indication of an intrusion, human or electronic assessment should be immediate and ongoing. Security forces should be repositioned to deny access to the target and to contain the adversary. This assures maximum safety of response personnel, while controlling the target area through denial and containment actions.

Second, regardless of the order in which they are employed, provisions should be made for separation of response elements (persons, teams, vehicles) and for mutual support between elements. Whether the response elements are moving to a denial or a containment position, it is desirable that a minimum of two security elements be employed. The response elements should be separated sufficiently to reduce vulnerability to adversary fire, yet close enough to provide mutual support. The same principle of mutual support applies to security elements occupying containment positions. They should be positioned so an adversary cannot escape by eliminating just one member or element of the security force.

Next, security force deployment must anticipate and provide for the use of diversionary tactics by adversaries. Where multiple targets exist, the adversary force can be expected to use diversionary tactics at one target to cover activity at the primary objective. Consequently, response plans for any target should provide for surveillance of other potential targets on site.

Finally, no matter how detailed plans are or how completely they are rehearsed, there always will be some requirements for redirection during an engagement. Such redirection can be enormously simplified and communications security can be considerably enhanced if response plans provide for a classified checkpoint and/or grid system. Checkpoint and grid systems are references superimposed upon site maps that are distributed to security forces. These references are handled, controlled, and changed in the same manner as any other secure code. They permit rapid and secure redirection of responding elements to

alternate positions in the likely event that the adversary force is monitoring security force radio communications.

In summary, separate response plans should be developed for each target that is included on the site target list. Each plan should include:

- Target description
- Denial and containment position locations
- Response routes
- Security force deployment instructions
- Provisions for diversionary actions on the part of adversaries
- Checkpoint and/or grid system.

3.1.3 Reinforcement Planning

Plans should provide for introduction of additional forces into the tactical area and their integration into the response and overall security effort. Introduction of reinforcements into any confrontation poses certain difficulties. Although their capabilities must be brought to bear quickly, integration must not create undue risk to friendly security forces. Reinforcement can be accomplished efficiently and safely only where prior planning clearly identifies authority, allocation of missions, zones of responsibility, tactical radio frequencies, reporting points, and similar factors.

3.1.3.1 Use of Reinforcements. All on-duty security forces not engaged in the immediate confrontation can be regarded as reinforcements. However, such forces have other security functions and must also serve as a general reserve for the entire site. If these forces are ordered into action, other areas may be stripped of protection and vulnerable to adversary actions. Given the potential for diversionary action, it is important that only the senior security force representative responsible for response operations be granted authority to modify normal deployment of security forces or commit security reserves during an emergency. At no time should response actions be permitted to degrade overall on-site security.

Preplanning to introduce and integrate off-duty and off-site security reinforcements into a prolonged tactical situation is an important consideration. The number of guards available for reinforcement should be based on commitments made in the Physical Security and Safeguards Contingency Plans. The general responsibilities that reinforcements will assume as they enter the situation should be determined before a crisis occurs. It is not essential to preplan where the reserve forces will be committed since their specific placement will depend upon the developing situation. The senior security force representative in charge should have time to ascertain the location and nature of the problem before

reinforcements arrive, then assign them when and where they are needed as they become available. However, responding off-site forces should not be introduced piecemeal into situations involving hostile fire from organized adversary forces. The rules of mutual support apply here, as they do for other on-site response elements.

3.1.3.2 Use of Tactical Response Team Personnel. Regulations require that normal duties of TRT personnel not interfere with their responsibility to fulfill TRT functions. TRT personnel should be trained to perform TRT functions in addition to regular duties as security personnel. TRT personnel execute their normal duties until they are called upon to perform TRT missions. Duties not related to TRT functions should not interfere with the ability of TRT members to provide immediate response. TRTs should not be held in reserve for special missions and excluded from initial actions. They are expected to be the best trained, armed, and equipped security personnel and are to be dedicated to the immediate, time-critical response actions necessary to thwart adversary attacks.

3.1.3.3 Outside Assistance. Outside agencies that are able to provide assistance in safeguards contingencies may constitute an integral part of the site's overall security capability. Based on pre-existing agreements, LLEA may provide this function. Outside assistance from other sources, such as the Federal Bureau of Investigation, adjacent nuclear site security forces, or state police may be pre-arranged. Types of outside assistance available may include Special Weapons and Tactics (SWAT) teams, air support, explosive ordnance disposal (EOD), and canine support. The nature of this support varies from site to site.

Integration of outside support into site tactical operations requires site familiarization, planning, and training. Effective planning before a crisis provides greater assurance that actual response will be effective during a safeguards contingency. Managers and supervisors of organizations providing outside assistance may take part in tactical planning. Specific agreements should be formalized concerning the type, scope, and time span of the expected support, jurisdiction, lines of authority, and other operational factors. No time exists to resolve these issues during a crisis. If they participate, those off-site personnel providing assistance should be familiar with the facility, site operational procedures, and site security responsibilities. Where possible, they may participate periodically in security force and security management exercises, and be provided applicable security planning documents.

3.2 Specific Guidance

Upon completion of the site vulnerability analysis and all response and reinforcement planning, the stage is set for the development of scenarios and exercise control plans designed to test the effectiveness of security forces and the overall security system.

This section details the elements of a typical Exercise Control Plan, including the scenario. It parallels and expands on the example Exercise Control Plan provided in Appendix C. An Exercise Coordinator designing an initial exercise may find the examples overly complex. However, it is usually best to start with fully developed exercise control plans and scale them back after on-site experience has been gained. Exercise control plans and scenarios may then be abbreviated, provided that no essential elements are omitted, particularly for LSPEs.

3.2.1 Exercise Purpose

This is the introductory section of an Exercise Control Plan. It should cover the essential questions (who, what, when, where, and why) of the exercise. Essential objectives of the exercise must be clear if the exercise is to attain its intended purposes.

3.2.2 Exercise Concept

This section describes the type of exercise and how, in general, it is to be conducted and controlled. It should clearly detail the simulation concepts, actual security requirements (such as the makeup and location of all members of the security shadow force), control measures, and other essential descriptive information concerning the exercise.

3.2.3 Scenario

This section is divided into two major subsections: adversary description and adversary actions.

3.2.3.1 Adversary Description. This subsection describes the adversary in terms of numbers, attributes, motivations, weapons, equipment, intelligence sources, and similar factors. Detailed descriptions are essential to ensure that actions are planned to realistically portray the adversarial group involved.

3.2.3.2 Adversary Actions. This subsection of the Exercise Control Plan is the heart of the scenario. It should include a complete description of all planned adversary actions including:

- Approach to the site
- Entry path and method
- Target
- Dealing with alarms, barriers, towers, and patrols
- Use of adversary security teams
- Use of diversionary actions
- Alternate plans

- Exit path from the site
- Departure plans.

All scenarios should involve a plausible target and a set of actions for the postulated adversary force. It is not necessary that all adversary actions actually be carried out, as simulation can be used effectively. However, the scenarios must be complete and detailed. It is not sufficient to simply say that a specific number of adversaries were observed crossing a fence. Other factors must be addressed including why they are crossing the fence, where they are going, whether their route leads to a logical target area, and how they plan to escape.

3.2.4 Systems To Be Exercised

This section of the Exercise Control Plan should list all subsystems that are involved in protecting the exercise target. It should list the appropriate barriers, sensors, lighting, CCTV, central and secondary alarm stations, towers, entry and exit control points (EECPs), vaults, material access areas (MAAs), and personnel involved. This information is necessary for a complete evaluation so all strengths and weaknesses can be identified. Evaluator checklists (Appendix H) provide for evaluation of both the security force and security system performance.

3.2.5 Exercise Control

This section of an Exercise Control Plan provides the details of how the exercise is to be controlled while assuring that realism is attained. It should not allow exercise constraints or artificialities to affect the outcome. The following five subsections should be included.

3.2.5.1 Engagement Simulation Instructions for Participants, Vehicles, and Equipment. This subsection describes in detail all buildings, doors, fences, alarms, vehicles, personnel, weapons, and other aspects of the exercise that will be subject to simulation. It should be sufficiently clear so participants fully understand the rules of the exercise in order that simulations do not affect the exercise outcome.

3.2.5.2 MILES-Specific Instructions. This subsection addresses all issues involving MILES gear, if it is used. Information should include types of MILES-equipped weapons to be used, any structures or vehicles to be MILES-equipped, equipment settings, and any restrictions regarding the use of MILES equipment. This section is necessary to ensure that if MILES equipment is employed, it will be used to best advantage.

3.2.5.3 Off-Limits Areas. Off-limits areas and the boundaries of the exercise play area should be identified in complete detail in this subsection.

3.2.5.4 Controller and Evaluator Assignments, Equipment, and Responsibilities. This subsection contains detailed duties, responsibilities, and locations of everyone involved in controlling, evaluating, or observing the exercise, including the Exercise Coordinator,

controllers, evaluators, and observers. A separate subsection may be used to deal with instructions for visitors and observers.

3.2.5.5 Coordinating Instructions. This subsection provides general instructions common to all exercise participants, controllers, and evaluators. It should include discussion of holding areas, communications, evaluation procedures, exercise initiation and termination, uniforms and equipment, sequence of events, and any other special instructions. Key concerns are as follow:

- Evaluation - Coordinating instructions for evaluation and critique should be indicated.
- Holding Areas - If holding areas are used for response personnel, shadow forces, or LLEA, they should be discussed. Holding areas should be centrally located and in an area that does not interfere with exercise play. Holding areas for shadow forces must be out of the exercise play area, but located so that actual response is facilitated, if required.
- Uniform and Equipment - Clothing and equipment required by security forces, adversaries, controllers, evaluators, and observers should be specified. Items generally provided include special identifiers such as headgear, vests or arm bands, and exercise radios and controller guns, if MILES equipment is used.
- Communications - Radio frequencies and/or channels for use by all participants should be specified.
- Exercise Initiation - This subsection indicates when, under what circumstances, and by whom the exercise will be initiated.
- Exercise Termination - When, under what circumstances, and by whom the exercise will be terminated should be discussed. Provisions for emergency termination should be clearly stated.
- Sequence of Events - This subsection should describe the chronological listing of all events that are programmed, including exercise initiation, planned activities, preprogrammed message input, termination, and critique.
- Messages - This subsection includes a discussion of all preplanned messages that are to be used to simulate actual alarms, sightings, or other exercise events. All such messages shall be preceded by the phrase "THIS IS A DRILL."

3.2.6 Safety

This section of the Exercise Control Plan addresses general safety concerns. It refers to the Safety Plan that is part of the overall exercise package, as well as general facility safety procedures. It should make specific reference to any fire and medical support required for the exercise. The Safety Plan developed for the exercise contains

detailed instructions that address the safety concerns identified in Section 3.4.

3.2.7 Approval Signatures

All exercise plans should be reviewed and approved by security, safety, and operations management. The person who has approval authority should be determined by facility management. A typical approval chain would include:

- The Exercise Coordinator
- The Security Manager
- The facility Safety Manager
- A facility management representative.

3.3 Additional Documents Required

In addition to the basic Exercise Control Plan, other documents are required to assure adequate exercise planning. Examples of each are included as appendices to this document. They include:

- Rules of Conduct - These govern and limit the actions of participants in the exercise to minimize interference with facility operations and allow for meaningful exercise evaluation. Specific actions to accomplish this are detailed in Rules of Conduct developed specifically for each exercise (see Appendix D).
- Safety Plan - This document prescribes measures to be taken to assure safe conduct of exercises. The plan addresses safety for weapons, personnel, and vehicles, and responsibilities for safety (see Sections 3.2.6 and 3.4, and Appendix E).
- Exercise Preparation Checklist - This is an aid for the Exercise Coordinator in assuring that all necessary preparatory measures are taken prior to the exercise (see Appendix F).

3.4 Planning for Safety and Site Security During Exercises

Safety of personnel and operational equipment, as well as maintenance of security during the exercises, should be given utmost consideration in planning for tactical response exercises. The Exercise Control Plan (Appendix C), FOF Rules of Conduct (Appendix D), and Safety Plan (Appendix E) should all address these issues.

Specifically, the following precautions should be taken to assure safety and security needs are not compromised during tactical response exercises:

- The Exercise Coordinator should be designated as the exercise safety officer and be assigned direct responsibility for development of a Safety Plan and the safe conduct of exercises. Controllers and evaluators are assistant safety officers who, along with the Exercise Coordinator, have authority to hold or terminate an exercise in the interest of safety. All active exercise participants and other on-duty security personnel should be thoroughly briefed on their individual safety responsibilities.
- During FOF exercises in which MILES equipment is used, absolutely no live weapons or ammunition should be permitted within the exercise area except when the weapons are secured so as to be inaccessible to participants. Blank adapters for rifles and live round excluder barrels for shotguns should be installed on any weapons which are MILES-equipped. Multiple safety checks of all MILES weapons are essential prior to commencement of an exercise.
- A shadow force is normally employed as a compensatory measure during FOF exercises to provide response capability for an actual contingency. Shadow forces will generally not be necessary for non-FOF exercises. This force should be under direct supervision of controllers at all times. Release of the shadow force to respond to alarm conditions or emergencies should be coordinated between the security force shift supervisor and the Exercise Coordinator. The exercise must be interrupted or terminated whenever the shadow force is released to respond to an alarm. The controllers for the shadow force should be licensee security personnel whose authority is recognized and accepted. In some cases, fixed security posts, such as guard towers, are manned by security officers who are both exercise participants and shadow force personnel. In such situations, a controller must be assigned to each post at which live weapons and ammunition are present.
- When an FOF exercise involves only part of a facility, a buffer zone should be created to separate exercise areas from other portions of the site in which on-duty security forces are assigned. Exercise areas should be clearly demarcated by tape, cordons, or other means so that exercise participants and on-duty security force personnel are not inadvertently commingled. Exercise participants should respond to alarms within the exercise area only, and the on-duty armed security force should respond to all alarms outside the exercise area.
- For non-FOF exercises, during which live weapons and ammunition are carried, special instruction on weapons safety should be given to all on-duty security force personnel. The following safety precautions should be observed: (1) handguns should never be unholstered, (2) magazines should not be inserted into rifles, (3) a round should not be chambered in a shotgun, and (4) no weapon should ever be pointed at anyone. After the

exercise is terminated, a security force officer should inspect each rifle and shotgun to ensure that a round was not inadvertently chambered.

- Exercise radio traffic should begin and end with the words "THIS IS A DRILL" to assure that all security personnel can differentiate exercise play from actual security response information. This procedure applies to Central and Secondary Alarm Station traffic as well as simulated alarm or assessment information transmitted by controllers.
- Exercise participants should be in good physical condition and have received medical examinations required by 10 CFR Part 73. Significant physical and emotional stress is encountered during exercises, particularly FOFs. It is recommended that first aid treatment be immediately available, as well as an ambulance, which should be on site. The nearest fire department should also be advised of the exercise.
- Plant operations personnel should be informed by public address announcement or other suitable means that an exercise is to be conducted in a specific area.
- Participants who are designated as off-site responders should be staged in a holding area and released to participate only at the direction of a controller. Observers should be confined to specific locations and not be allowed to enter and remain in the exercise area without an escort. All controllers and evaluators should be clearly designated through the use of armbands or other readily observable measures. In addition, security force personnel and exercise participants should meet and be able to personally recognize evaluators and controllers prior to commencing the exercise.

4. EVALUATION DEVELOPMENT GUIDANCE

Benefits derived from any exercise are largely determined by the quality and thoroughness of the evaluation that is conducted. The preferred evaluation method uses a systematic approach emphasizing the general goals and objectives for a successful security system. The intent of this evaluation is to determine overall strengths and weaknesses. Evaluation should not focus on participants as individuals, but rather as elements of the security system.

The finding that a security force member failed to accomplish a required function (e.g., locking a gate or responding to the proper location) which allowed adversaries to escape is of little analytical value. The logical conclusion might be that a particular individual needs counseling or additional training, or may be the wrong individual to perform that task. This conclusion would not accurately reflect the posture of the overall security system. A more constructive finding would be that the security force did not accomplish functions required to thwart an adversary. This could then be explored to determine the root problem. Were plans sufficiently detailed to specify all required functions? If not, plans should be revised. If so, why were plans not followed?

This evaluation philosophy breaks down security system requirements into the following general categories:

- Coordination, command, and control
- Planning
- Communications
- Individual tactics
- Team tactics
- Application of force
- Intelligence
- Security force discipline
- Response and containment/denial
- Physical security systems and geography
- Other considerations
- Overall evaluation.

See Appendix H for samples of blank and completed evaluator checklists that address each of these categories. Objectives and standards in the following sections can be used to accomplish necessary evaluation using the evaluator checklists.

4.1 Coordination, Command, and Control

Objective: Clear, effective, and in-depth control, coordination, and utilization of security forces and other security assets assist in mission accomplishment.

Standard: Did coordination, command, and control contribute to or detract from the resolution of the contingency?

4.2 Planning

Objective: Predetermined plans and procedures provide for accomplishment of the security mission for any contingency that could reasonably be anticipated. They provide for the expeditious and orderly development of ad hoc plans to address unanticipated situations and enable security forces to act and react in a timely, effective, and successful manner.

Standard: Did planning contribute to or detract from the resolution of the safeguards contingency?

4.3 Communications

Objective: Capabilities exist to rapidly, accurately, and clearly exchange essential information between security force members, the TRT, and appropriate command and control personnel. Emphasis includes assurance that communications can be accomplished without compromising information relating to friendly forces or allowing adversaries to successfully inject spurious information.

Standard: Did communications contribute to or detract from the resolution of the safeguards contingency?

4.4 Individual Tactics

Objective: Capabilities exist to move, occupy positions, observe, and deliver fire in a manner that is effective in neutralizing the effect of adversary observation, movement, and fire.

Standard: Did individual tactics contribute to or detract from resolution of the safeguards contingency?

4.5 Team Tactics

Objective: Capability is provided to move and deliver fire in a coordinated team effort that provides for mutual support; minimizes exposure to adversary observation, detection, or fire; and brings the maximum available force to bear on the adversary at the optimum time and place for mission accomplishment.

Standard: Did team tactics contribute to or detract from resolution of the safeguards contingency?

4.6 Application of Force

Objective: Minimum force required is applied in a timely manner sufficient to deny adversaries access to vital areas, vaults, and MAAs; to prevent their escape with target material; or to neutralize an unacceptable penetration. Danger to security forces, non-hostile personnel, and adversaries is minimized consistent with requirements for containment, denial of access, prevention of escape, and threat neutralization. The unlawful taking of human life is prevented in all cases. Unnecessary escalation resulting from excessive force is avoided.

Standard: Did the application of force contribute to or detract from response to the safeguards contingency and was it applied in accordance with applicable law?

4.7 Intelligence

Objective: Maximum use is made of all appropriate resources to gather needed information concerning the adversary and the environment, and to communicate pertinent information to the appropriate command element.

Standard: Did intelligence gathering and dissemination contribute to or detract from resolution of the safeguards contingency?

4.8 Security Force Discipline

Objective: Security force personnel are mentally prepared and conditioned for professional conduct and timely obedience to orders under both routine and crisis situations. While a level of discipline is necessary to ensure proper professional conduct under routine conditions, individual and organizational discipline is strong enough to allow the individuals and the organization to continue functioning properly under extreme stress and crisis conditions.

Standard: Did security force discipline contribute to or detract from resolution of the safeguards contingency?

4.9 Response and Denial or Containment

Objective: Security forces can respond in a timely manner in appropriate numbers to contain or deny access to intruders and to preclude the adversary's escape and the removal of SSNM.

Standard: Did response and denial or containment contribute to or detract from resolution of the safeguards contingency?

4.10 Physical Security Systems and Geography

Objective: Physical security systems and tactical capabilities of the security force effectively merge. These elements provide for detection of penetration, accurate situational assessment, and sufficient adversarial delay to allow effective security force response. The security force is provided with vehicles, adequate routes throughout the site and its facilities, communications equipment, and weapons that will facilitate an appropriate response.

Standard: Does the physical plant security equipment contribute to provide a credible opportunity for the security force to accomplish its mission?

4.11 Other Considerations

Objective: None specified. This general category serves to evaluate factors that do not fit in other categories.

Standard: Did factors other than those described above have a significant impact on the achievement of the overall security objective? If so, what were they and what was their impact?

4.12 Overall Evaluation

Objective: The security system is capable of protecting against theft or diversion of SSNM.

Standard: Did the exercise demonstrate that overall security performance was strong and effective, adequate, or in need of improvement? If improvement is needed, did the exercise indicate exactly what actions would remedy the situation?

5. EXERCISE CONDUCT AND CRITIQUE GUIDANCE

5.1 Conduct

The majority of the work that goes into a successful exercise is accomplished before the exercise is initiated. After all plans and arrangements have been made and all documents have been prepared, the Exercise Coordinator must accomplish the appropriate actions indicated in the following sections. The guidance that follows applies to all tactical response exercises required by the rule. Since the NRC-observed and FOF exercises are more complex, they require more formal control and critique; and the guidance that follows should be used to the maximum extent. LSPEs are not as complicated, therefore, the exercise conduct and critique guidance for these exercises may be scaled down, as long as exercise control, safety, site security, and effective evaluation are not adversely affected.

5.1.1 Adversary Briefing

Prior to the exercise, adversary participants should receive an exercise briefing. This briefing will normally be presented by the Exercise Coordinator. It should consist of appropriate sections from the Exercise Control Plan, the Rules of Conduct, and the Exercise Safety Plan. The only portions of the Exercise Control Plan that should not be briefed to the adversaries are those that apply to specific security force plans and procedures to which an adversary would not normally have access. A sample Exercise Control Plan, Rules of Conduct, and Safety Plan are provided in Appendices C through E. A sample adversary briefing lesson plan is found in Attachment 1 to Appendix G.

5.1.2 Security Force Briefing

Prior to the exercise, security force participants should receive an exercise briefing. An example is found in Attachment 2 to Appendix G. This briefing will normally be presented by the Exercise Coordinator. It should consist of all appropriate sections of the Exercise Control Plan, the Rules of Conduct, and the Safety Plan. The only portions of the Exercise Control Plan that should not be briefed to security force participants are those that apply to specific adversary plans and activities. Depending on facility requirements, it may be desirable to have the facility safety manager present the briefing for the Safety Plan.

5.1.3 Controller Briefing

Prior to the exercise, all controllers must be briefed on exercise control, rules of conduct, safety, and on their general and specific duties (see Attachment 3 to Appendix G). The contents of the Exercise Control Plan, Rules of Conduct, and Safety Plan should be discussed in this briefing.

5.1.4 Evaluator Briefing

Evaluators should get essentially the same briefing as controllers, plus a detailed briefing on evaluation procedures and responsibilities (see Attachment 4 to Appendix G). It is generally a good practice to provide evaluators with evaluator checklists and go over sample completed evaluations (see Appendix H) with them at this briefing.

For purposes of clarity, the four sample lesson plans for each briefing are presented separately in appendices to this Handbook. However, it is usually possible to save significant preparation time by combining briefings. Adversaries, security forces, controllers, and evaluators can all be jointly briefed on the Rules of Conduct and Safety Plan. Evaluators and controllers can be jointly briefed on the Exercise Control Plan. However, adversaries and security force participants should receive separate briefings on the Exercise Control Plan, and evaluators should be briefed separately on evaluation responsibilities.

5.1.5 Positioning of Forces

After all briefings have been accomplished, forces must be positioned within the exercise area. This includes the following actions:

- The exercise area must be cleared of all security personnel actually armed with live weapons.
- Adversaries must be moved to their exercise start positions (normally outside of the facility boundary).
- Security force participants must be moved to their normal duty positions.
- Off-site LLEA responders, if participating, should be positioned in holding areas outside of the protected area.
- Shadow force personnel (who provide actual security during the exercise) should be positioned where their response will be most effective.

Each of the above groups should be accompanied by a minimum of one controller who is in radio contact with the Exercise Coordinator. Prior to exercise initiation, all controllers must notify the Exercise Coordinator and report that all forces are in position, all safety checks have been completed, and that the forces they have accompanied are ready to begin the exercise.

5.1.6 Exercise Initiation

The Exercise Coordinator announces the opening of the exercise window (or the beginning of exercise activities) once all participants are reported as ready. This announcement should be made over the exercise control radio net and repeated over the security force and adversary radio nets. Exercise initiation announcements should be acknowledged by all parties.

5.1.7 Exercise Progression

The Exercise Coordinator monitors the overall exercise and should not be encumbered with specific exercise control functions. Specific exercise control functions should be accomplished by exercise controllers. The Exercise Coordinator should be free to monitor the exercise progress by monitoring the exercise control, security forces, and adversary radio nets. The Exercise Coordinator should take an active part only if some aspect of the exercise appears to be going awry; and, at that point, ensure that the exercise progresses toward its intended outcome in a safe, realistic, and secure manner.

5.1.8 Exercise Termination

The Exercise Coordinator should terminate the exercise when the exercise conditions stated in the Exercise Control Plan have been met, when an uncorrectable safety condition arises, when an actual security condition arises, or when management determines actual operational conditions exist which preclude continuation of the exercise. Prior to termination, under normal conditions (i.e., completion of exercise conditions for termination), the Exercise Coordinator should check with all controllers and evaluators to ensure that exercise objectives have been fully achieved.

5.2 Exercise Critique and Evaluation

Critique and evaluation of tactical response exercises is one of the most important steps in the exercise process. Improvement in the security system will not be derived from the tactical response exercise program without effective evaluation of what occurred during the exercise and identification of strengths and weaknesses. Standardized planning procedures and checklists enhance these goals. The following points should be considered when evaluating tactical response exercises and included in the after-action critique:

- Evaluation should be based on what is actually observed or can be reasonably inferred.
- Evaluators must remain neutral regarding the outcome of the exercise.
- Evaluators must avoid influencing the outcome of the exercise by their presence. They should be as inconspicuous as possible.
- Evaluation should be performance-based. Evaluators should not judge events by how they personally would have performed a particular action. The evaluation standard should be whether or not a particular result was achieved, not necessarily by how the action was accomplished to achieve the objective.

- Overall success by the security force does not necessarily mean that everything was done correctly. Conversely, adversary success does not mean that everything was done wrong. Evaluators should look for strengths and weaknesses of subsystems so that deficiencies and corrective actions can be identified at that level.

Exercise evaluation begins when the exercise ends. Meaningful evaluation requires that proper critiques be given. In general, an exercise should be followed by two critiques, one involving all participants (including controllers and evaluators), and a second involving only the evaluators and the Exercise Coordinator (or individuals responsible for writing the exercise report). The first critique should be held immediately following the exercise, as soon as all participants can be assembled and normal security is reestablished. The purpose of this critique is to share observations and exchange other information for the general benefit of all concerned. A typical critique would be conducted as follows:

- The Exercise Coordinator begins the critique and ensures that controller/evaluator comment sheets (see Appendix I) and participant critique sheets (see Appendix J) are distributed. The purpose of the critique and the proposed agenda should be included.
- The adversary leader presents a perception of the exercise from the adversary's viewpoint, including original plans, any modifications, problems encountered, and apparent factors contributing to success or failure. All questions presented by evaluators, controllers, and security force participants should be answered.
- The security force leader presents a perspective of the exercise, including response plans, modifications to the plans, problems encountered, and apparent factors contributing to success or failure. Any questions that controllers or evaluators have regarding exercise events should be answered. If separate special response teams, LLEA, or other mission-type forces were involved, their leaders should make similar presentations.
- Each evaluator presents a general critique of the portion of the exercise observed. Each should follow the general outline of the evaluator checklist and respond to questions from the assembled group regarding any observations.
- Controllers are given an opportunity to clarify points based on their observations. However, it is not necessary for all controllers to offer comments.
- If appropriate, observers may be afforded the opportunity to make comments.

- The Exercise Coordinator makes closing remarks and provides instructions on completing and returning evaluator checklists, participant critique sheets, and controller/evaluator comment sheets.

The second critique should be scheduled for the day following the exercise and should involve only the exercise evaluators and the Exercise Coordinator. Before this critique, the Exercise Coordinator should collect and review all participant critique and controller/evaluator comment sheets and then should be prepared to share this information with the evaluators.

Evaluators should be given the opportunity to complete their checklists at this time. Evaluators should review their checklists and share all observations and conclusions with the other evaluators and with the Exercise Coordinator. Disparities in observations and conclusions should be resolved and evaluators should modify their checklists accordingly.

The Exercise Coordinator should then summarize strengths and weaknesses observed during the exercise and solicit suggestions that evaluators may have for improving either the security system evaluated or the design of future exercises.

All documents should be assembled in a historical file once the second critique is completed. The Exercise Coordinator should then write a report summarizing the exercise conduct and its results. Report formats will vary according to the requirements of each facility. However, each report should briefly describe the exercise conduct and outcome, list strengths and weaknesses observed, and provide recommendations for improvement. The report should be provided to facility and security management for their information and necessary action.

6. NEEDS AND REQUIREMENTS

This section deals with the personnel, training, equipment, and support requirements for conducting FOFs and LSPEs. It is divided into separate subsections for the NRC-observed exercises (which are one of the periodic FOF exercises), the periodic FOF exercises, and the periodic limited scope (non-FOF) exercises. Differences exist in the number of security personnel assigned at various sites, and numbers at a given site depend on the particular scenario involved. Therefore, generic requirements are addressed without specifying exact numbers of personnel involved. The estimated hours allocations are for planning purposes only and may vary from those needed in actual practice.

6.1 NRC-Observed Exercise

The most complex and resource intensive exercise envisioned could be the NRC-observed exercise if the licensee decides to expand the FOF exercise to include outside response. If this is done, it would involve the longest exercise window, the greatest number of participants, the most equipment, and the most extensive planning and coordination. However, outside response for an NRC-observed exercise is not required. This Section discusses maximum needs should the licensee elect to conduct an exercise that includes outside response.

6.1.1 Personnel Requirements

Personnel needed to plan, conduct, and participate in an exercise of this type include exercise coordinators, evaluators, controllers, security force participants, adversaries, shadow forces, and possibly LLEA.

6.1.1.1 Exercise Coordinator. The Exercise Coordinator should normally be a senior member of the security operations and training staff. No particular training is required, although it is beneficial to have exercise coordinators participate as assistant exercise coordinators on several exercises, in order to familiarize them with the requirements involved. In the absence of such opportunities, any qualified security operations or training officer should be capable of planning and conducting an exercise.

The time required to develop, conduct, and follow up on an exercise will also vary. However, an estimate is approximately 120 to 200 staff-hours per NRC-observed exercise. These hours include those for the Exercise Coordinator and other supporting staff members.

6.1.1.2 Evaluators. Exercise evaluators should be provided at the Central Alarm Station (CAS) and Secondary Alarm Station (SAS), and with all major elements of the responding security forces. Additionally, at least one evaluator should be in a tower or other elevated position from which a general view of the exercise can be gained. Depending on the scenario, it may also be desirable to have an evaluator with the adversary force. Generally, six evaluators are sufficient for an exercise of this type.

Evaluators should be drawn from security, supervisory, and management positions. They should have basic tactical background that enables them to make sound judgments regarding security system and security force performance, using an evaluation checklist similar to that provided in Appendix H. Prior to an exercise, evaluators should participate in an evaluation briefing (of approximately one hour) with the Exercise Coordinator (see example briefing outline in Appendix G). They should also participate in briefings on the Exercise Control Plan, Rules of Conduct, and the Safety Plan, also requiring approximately one hour. After the exercise, evaluators prepare for, and participate in, two critiques requiring approximately three hours. The time needed by a single evaluator is approximately two hours for pre-exercise preparation, seven hours for the exercise window (this time period may vary according to the time allotted for the exercise window), and three hours for post-exercise activities; for a total of a maximum of 12 hours each. Assuming an average of six evaluators per exercise, this equals a maximum of 72 hours of evaluator time needed for each NRC-observed exercise.

6.1.1.3 Controllers. Exercise controllers should be provided at the shadow force holding area, the visitor and observer area, portals at which explosive entry is simulated, and any other location at which the Exercise Coordinator may need to exert control and at which no evaluator is positioned. No special background is required for controllers and they may be drawn from either security or operational staffs. Exercise-specific training for controllers parallels that of the evaluators, with the exception of the evaluator briefing and the second critique session. (See controller briefing outline, Attachment 3 to Appendix G.) Therefore, approximately nine hours per controller would be needed for an exercise of this type. With few exceptions, four controllers (in addition to the Exercise Coordinator and the six evaluators) would be sufficient for an NRC-observed exercise. Thus, a total of approximately 36 hours of controller time is normally needed.

6.1.1.4 Security Forces. The number of security force personnel participating in an exercise will vary greatly depending on the site and the scenario involved. However, it is unlikely that any exercise would require active participation of more than one normal shift complement of security force members plus off-duty call-ins. Off-duty call-ins are normally simulated during an FOF because these additional personnel would receive minimal training benefit. If an off-duty call-in is to be exercised, it can be more economically done separately from the FOF, using a random sampling technique for recall. Exercise-specific training is discussed in Section 6.4. Each security force member should be allotted approximately two hours for weapons and equipment issue and checks, one hour for a security force briefing including safety and Rules of Conduct, one hour for positioning, up to seven hours (which may vary according to the time allotted for the exercise window) for the exercise window, and one hour for equipment turn-in and critique; for a total of a maximum of 12 hours, exclusive of training time addressed in Section 6.4. Thus, for 30 on-duty personnel, a maximum of 360 hours of time could be needed for an NRC-observed exercise involving outside response.

No actual staff-hours are required for simulated call-ins. If the call-in is actual, two to four hours per security force member should be allocated.

6.1.1.5 LLEA. Normally, LLEA participation is voluntary and should be limited to attendance at the security force briefing, the establishing of roadblocks, conduct of pursuit or other appropriate missions during the exercise window, and the critique. In such instances, no particular training is needed other than the attendance at the pre-exercise briefing. During the majority of the exercise window, LLEA personnel can go about their normal duties. If, on the other hand, an appropriate LLEA mission exists in support of the site Physical Security or Safeguards Contingency Plans, in which LLEA may be involved in a firefight, and if LLEA is to actively participate, all training provided to security force members should also be provided to LLEA participants (including the eight hour MILES familiarization, if MILES equipment is used, and tactical training discussed in Section 6.4).

6.1.1.6 Adversary Participants. The number of adversaries should be determined in accordance with the exercise scenario and should not exceed the design basis threat. They should be drawn from site security forces, preferably those with TRT training.

Generally, two full days of training should be allocated to the adversary force prior to the exercise to provide for scenario-specific planning, rehearsals, and training. Thereafter, they would be involved in the same 12 hours of exercise preparation, conduct, and post-exercise activities as security force participants. Therefore, each adversary can be expected to need 28 hours for preparation and participation for an exercise of this type.

6.1.1.7 Shadow Forces. In general, a maximum of one shift is needed to cover actual security requirements for any given FOF exercise. These personnel form the shadow force that is positioned in one or more holding areas that are off-limits to problem play. The shadow force is normally drawn from an off-duty shift. No special training is required. Approximately eight hours for each member of the shadow force will be needed.

6.1.2 Equipment for Security Forces and Exercise Control*

6.1.2.1 Weapons. The revolver is a MILES-dedicated weapon. Existing security force revolvers cannot be modified by the addition of an external laser transmitter, as is the case with AR-15s, shotguns, and 7.62mm rifles. Generally speaking, one MILES revolver is required for each participant, plus a 10 percent reserve. Additional revolvers may be required if LLEA is to participate actively in a MILES-enhanced exercise.

*The use of laser enhanced weapons such as MILES equipment or other suitable weapons simulation equipment is recommended, but not required. See Sections 2.3.3.b and 3.1.

6.1.2.2 MILES Equipment. The following list identifies the specific items of equipment needed for a MILES-enhanced exercise. Vehicle harness systems are available, but can be eliminated from these exercises by the expedient of having controllers decide and announce vehicle and structure "kills." For economy purposes, vehicle harnesses are not included in the equipment listings throughout the Handbook. A ten percent reserve of spares should be provided to replace malfunctioning units.

<u>Item</u>	<u>Quantity</u>
7.62mm or .30 Caliber Rifle with Transmitter and Blank Adapters	1
AR-15s with Transmitters and Blank Adapters*	22
Shotgun Barrels with Transmitters*	11
Personnel Detector Harnesses	33
MILES Controller Guns	5

6.1.2.3 Ammunition and Pyrotechnics. The following list provides for bore-sighting, equipment checks, and a complete basic load of ammunition for each participant for one exercise. These quantities are established as a maximum possible inventory need and reflect basic load allocations. Very little ammunition is actually used in most exercises. A conservative figure would be that approximately 20 percent of available ammunition and pyrotechnics are consumed during a given exercise.

<u>Item</u>	<u>Quantity</u>
7.62mm or .30 Caliber Blank Ammunition	100 rds
5.56mm Blank Ammunition	2,400 rds
.357 Caliber Blank Ammunition	540 rds
12 Gauge Shotgun Blank Ammunition	200 rds
Grenade Simulators	12

6.1.2.4 Communications Equipment. The only additional communications equipment required for an exercise (in addition to that which is available for normal operations) is for exercise control. Generally speaking, the Exercise Coordinator, and each evaluator and controller should have a multi-channel radio on a frequency separate from the security force and adversary radio nets. All security forces should use their normally assigned radios. For an exercise of this nature, 12 controller radios are generally sufficient.

*This assumes that AR-15s and shotguns in the licensee's inventory will be converted for MILES use, and that there are sufficient numbers of these weapons in the licensee's inventory to equip both exercise personnel and the shadow force.

6.1.3 Adversaries

A "normal" mix of adversary weapons, equipment, and ammunition would include the following:

<u>Item</u>	<u>Quantity</u>
MILES-Modified .357 Revolvers	1 ea*
MILES-Equipped M-16s	1 ea*
MILES-Equipped Sniper Rifles (7.62mm or .30 Caliber)	2
Personnel Detector Harnesses	1 ea*
Radios with Discrete Frequencies	1 ea*
Hand-Held Frequency Scanner	1 ea
5.56mm Blank Ammunition	120 rds ea *
.357 Caliber Blank Ammunition	18 rds ea *
7.62mm or .30 Caliber Blank Ammunition	200 rds
Miscellaneous Backpacks, Bolt Cutters, Gloves, Simulated Explosives, Etc.	

*These are quantities for each individual adversary. For the total required for an exercise, multiply these numbers by the total number of adversaries assigned the equipment specified for the exercise, plus a ten percent reserve of spares.

6.1.4 Summary of Equipment Requirements

Equipment Addressed in Sections 6.1.2 and 6.1.3 for the NRC-observed exercise is as follows:

<u>Item</u>	<u>Exercise Control and Security Forces</u>	<u>Adversaries</u>	<u>Total</u>
MILES-Modified .357 Revolvers	33	1 ea	*
Blank Modified 5.56mm Magazines	88	4 ea	*
AR-15 Blank Adapters**	22	--	*
AR-15 Transmitters**	22	--	*
Shotgun Barrels with Transmitters**	11	--	11
MILES-Equipped M-16s***	--	1 ea	*
MILES-Equipped Sniper Rifles	--	2	2
MILES-Modified 7.62mm or .30 Caliber Rifle	1	--	1
Adversary Radios	--	1 ea	*
Frequency Scanner	--	1	1
Controller Radios	12	--	12
Personnel Detector Harnesses	33	1 ea	*
MILES Controller Guns	5	--	5
5.56mm Blank Ammunition	2400 rds	120 rds ea	*
.357 Caliber Blank Ammunition	540 rds	18 rds ea	*
12 Gauge Shotgun Blank Ammunition	200 rds	--	200 rds
7.62mm or .30 Caliber Blank Ammunition	100 rds	200 rds	300 rds
Grenade Simulators	12	--	12
Miscellaneous Equipment	--	As Required	--

*To determine total numbers required, multiply the number in the Adversaries column by the number of adversaries assigned the equipment specified. Add the total adversary quantity to the quantities under the Exercise Control and Security Forces column to determine the total.

**This assumes that AR-15s and shotguns in the licensee's inventory will be converted for MILES use and that there are sufficient numbers of these weapons in the licensee's inventory to equip both exercise personnel and the shadow force.

***Adversary force M-16s should be supplied with MILES transmitters and blank adapters. If they are not, the appropriate number of additional AR-15 MILES transmitters and blank adapters (identical to M-16 MILES transmitters and blank adapters) will be required.

NOTE: The figures addressed in this section are for the exercise only. They do not include the eight hour familiarization training that is recommended (see Section 6.4). For the familiarization training, approximately 200 rounds of 5.56mm, 36 rounds of .357 Caliber, and 20 rounds of 12 gauge shotgun blanks would be required for each participant. The number of weapons and personnel harnesses required depends on the number of participants in a given training session.

6.2 Force-on-Force Exercises

There is no clear-cut difference between a periodic FOF exercise and an NRC-observed exercise that includes outside response other than the shorter duration of the exercise window, a generally smaller security force involvement, and the degree of participation by LLEA. Generally speaking, a two to three hour exercise window will suffice for the FOF exercises, there is no LLEA participation, and a smaller portion of the security force is involved. As a rule of thumb, needs and requirements for a FOF exercise may be reduced by approximately one half to one third from the estimates for an NRC-observed exercise addressed in Section 6.1. These general economies can result in considerable savings in terms of both manpower and equipment. A suggested allocation per FOF exercise is as follows (assuming MILES training has been accomplished):

6.2.1 Personnel Requirements

<u>Title</u>	<u>Persons</u>	<u>Approximate Total Hours</u>
Exercise Coordinator	1	100
Exercise Evaluator	4	32
Exercise Controller	3	24
Security Forces	20	160
Adversaries	As Determined	8 ea
Shadow Forces	10	80

6.2.2 Equipment Requirements

<u>Item</u>	<u>Exercise Control and Security Forces</u>	<u>Adversaries</u>	<u>Total</u>
MILES-Modified .357 Revolvers	22	1 ea	*
Blank Modified .556 Magazines	60	4 ea	*
AR-15 Transmitters	15	--	*
AR-15 Blank Adapters	15	--	*
Shotgun Barrels with Transmitters	7	--	7
MILES-Equipped M-16s**	--	1 ea	*
MILES-Equipped Sniper Rifles	--	2	2
MILES-Modified 7.62mm or .30 Caliber Rifle	1	--	1
Controller Radios	12	--	12
Adversary Radios	--	1 ea	*
Frequency Scanner	--	1	1
Personnel Detector Harness	22	1 ea	*
MILES Controller Guns	4	--	4
5.56mm Blank Ammunition	1,560 rds	120 rds ea	*
.357 Caliber Blank Ammunition	360 rds	18 rds ea	*
12 Gauge Shotgun Blank Ammunition	100 rds	--	100 rds
7.62mm or .30 Caliber Blank Ammunition	100 rds	200 rds	300 rds
Grenade Simulators	6	--	6
Miscellaneous Equipment	--	As Required	--

6.3 Limited Scope Performance (Non-Force-on-Force) Exercises

LSPEs, sometimes referred to as card exercises, require almost no assets beyond coordination, control, and evaluation. An Exercise Coordinator is required to develop the scenario, write the Exercise Control Plan, and conduct the exercise and critique. Evaluators and controllers are required, but to a lesser extent than in an FOF. Security forces that may be involved are those which are already on duty. No adversary force is required. Those actions accomplished in a FOF by adversaries are simulated during an LSPE by controllers. No special equipment, other than identification vests and controller/evaluator radios, are required. For LSPEs, existing site radio equipment and nets will normally suffice for exercise control. A suggested allocation per LSPE is as follows.

*To determine total numbers required, multiply the number in the Adversaries column by the number of adversaries assigned the equipment specified. Add the total adversary quantity to the quantities under the Exercise Control and Security Forces column to determine the total.

**Adversary force M-16s should be supplied with MILES transmitters and blank adapters. If they are not, the appropriate number of additional AR-15 MILES transmitters and blank adapters (identical to M-16 MILES transmitters and blank adapters) will be required.

6.3.1 Personnel Requirements

<u>Title</u>	<u>Persons</u>	<u>Approximate Total Hours</u>
Exercise Coordinator	1	24
Exercise Evaluators	4	16
Exercise Controller	3	12

6.3.2 Equipment Requirements

None

6.4 Training Needs

No exercise-specific training is required for the exercises. However, it is recommended that all armed security force personnel undergo a minimum of eight hours of MILES familiarization and basic MILES-enhanced individual and team tactical training prior to participating in a FOF exercise. Since exercises are required on all shifts, training requirements will be based on the number of assigned personnel. If all personnel on each shift receive this training, at least eight hours per person should be allocated until all personnel are trained. Annual training is not required. Tactical training to meet the requirements of 10 CFR Part 73 can be accomplished during the course of the exercises.

APPENDIX A
REFERENCES

APPENDIX A

REFERENCES

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APPENDIX B
DEFINITIONS

APPENDIX B

DEFINITIONS

1. Controller - An individual assigned to assist in the conduct of the exercise. General responsibilities are to enforce safety rules and rules of conduct. Specific responsibilities may include opening doors, gates, etc., either after forcible entry actions have been simulated, or following a previously developed timeline; and, maintaining control of shadow force personnel, live weapons, and ammunition. Controllers may be facility operations, support, security, or other qualified persons.
2. Evaluator - An individual assigned to assess security force and TRT performance during security force tactical response exercises. Evaluators are normally assigned to evaluate each major response element participating in the exercise.
3. Exercise Coordinator - A person assigned primary responsibility for planning, conducting, and reporting on the exercise.
4. Exercise Control Plan - The overall plan used to govern the conduct of FOF and non-FOF exercises. This plan includes a Safety Plan, Rules of Conduct, Exercise Scenario, and control procedures.
5. Force-on-Force (FOF) Exercise - An exercise during which all aspects of an attack on a facility are performed, within the limits of safety and maintenance of site security. The facility security force is exercised in normal shift configuration, either in whole or in part, depending on the scope of the exercise, and an adversary team is used. A FOF exercise can include both on-site and off-site responders, or be limited to only the on-site security force shift, or part of a shift, on duty. MILES or other comparable equipment may be used by participants to provide the maximum degree of realism, as well as to ensure accurate assessment of the results of tactical engagements and of the effectiveness of the security system.
6. Limited Scope Performance Exercise (LSPE) - This type of exercise does not use an actual adversary team. Instead, adversary actions are hypothetical. A time-line is developed by exercise planners to detail adversary actions and event sequences throughout the scenario to its endpoint (i.e., final capture or escape of adversaries). The timeliness of security force response can be evaluated against this time-line to determine if responders arrived in sufficient time and numbers to effectively interrupt the sequence of adversary actions. Security force response is initiated and affected by ongoing alarm and assessment information simulating adversary actions. This information is given to appropriate on-duty security force personnel by controllers. This type of exercise can be conducted with minimal or no notice to on-duty security force personnel. It is used primarily to evaluate the timeliness and adequacy of initial security force response.

7. Local Law Enforcement Agency (LLEA) - Duly constituted law enforcement agency which has the responsibility to respond to safeguards contingencies which involve criminal actions. LLEA may include local and state police, and sheriff's departments which have jurisdiction in the location of a licensee site.
8. Rules of Conduct - The rules which govern and limit the actions of participants in the exercise to minimize interference with facility operations and allow for meaningful exercise evaluation.
9. Safety Plan - The document which prescribes measures to be taken to assure safe conduct of tactical response exercises. The plan addresses weapons safety, personal safety, vehicle safety, and responsibilities for safety.
10. Scenario - A general description of targets and adversary actions which are critical to conduct of the exercise. The scenario provides a "script" for the exercise. Details are omitted from the version of the scenario included in the Exercise Control Plan to avoid compromise of critical information which should not be revealed to participating security force personnel.
11. Security Force Tactical Response Exercises - Any of several types of NRC-required training and evaluation exercises designed to assess the armed response capabilities of site security forces. These include FOF exercises, which may employ MILES or other comparable equipment and adversary forces, and LSPEs which do not use MILES or other comparable equipment and which simulate adversary actions. This term is used interchangeably with "tactical response exercises" and "exercises" throughout the Handbook.
12. Shadow Force - A group of security force personnel, equipped with live weapons and ammunition, present during a tactical response exercise to provide armed response in the event of an actual safeguards contingency.
13. Tactical Response Team - The primary response force for each security shift, who can be identified by a distinctive difference in uniform, who are armed with specified individual response weapons, and whose other duties permit immediate response.

APPENDIX C

EXAMPLE FORCE-ON-FORCE EXERCISE CONTROL PLAN

APPENDIX C

EXAMPLE FORCE-ON-FORCE EXERCISE CONTROL PLAN

(MILES-Enhanced)

7 Dec 1989

1. EXERCISE PURPOSE

The purposes of this exercise are to provide site-specific response training for the SHIELD contract security forces at XYZ Plant and the supporting local law enforcement agency (LLEA) officers from the Mill City Police Department (MCPD) and Forrest County Sheriff Department (FCSD), and to provide XYZ and SHIELD security management with opportunities to evaluate the XYZ security system in general and SHIELD response training in particular. This exercise is not a part of the formal SHIELD contract performance evaluation program. Deficiencies noted will be used only to form the basis for improving security system effectiveness and security force response training. Exercise development, control, evaluation, and critique responsibilities will be shared between XYZ and SHIELD security management with SHIELD having primary responsibility and XYZ having final approval authority. This exercise will be conducted on and around the XYZ plant site. It is tentatively scheduled for 0100 to 0600 on the morning of 10 December, 1989.

2. EXERCISE CONCEPT

The primary objective of the security system at XYZ is the protection of strategic special nuclear material (SSNM) against theft or sabotage. This exercise will provide for response training and evaluation against on overt theft attempt of SSNM.

To accomplish its objectives, an NRC-approved security system is designed to provide five basic functions: detection, delay, assessment, communication, and response. This exercise will provide for training and evaluation in all five functions. It will be a MILES-enhanced exercise involving a maximum design-basis threat adversary force. All vehicles that might come into play, with the exception of the adversary escape vehicle, will be MILES-equipped. All personnel who fully participate in the exercise will wear MILES harnesses and will be armed exclusively with laser-equipped weapons. Security personnel who are not involved in the fire-fight portions of the exercise, (such as Central Alarm Station (CAS) operators and Material Access Area (MAA) entry and exit control point (EECP) guards outside of the exercise play areas) will actively observe, communicate, and coordinate but they will not participate in any fire-fight that might develop during the exercise. If there are any personnel with live weapons within the exercise area who are not participating in the exercise, they shall be under the direct observation and supervision of a controller to assure safety. Any live weapons or ammunition within the exercise area should be under the direct supervision of a controller or be secured so as to be inaccessible during the exercise, unless an actual security emergency arises during such exercise. This will allow

them to accomplish their normal security functions during the exercise. Additionally, a "shadow force" of fully armed guards will be strategically located outside of the problem play area to fulfill armed response security functions normally accomplished by those guards who are involved in the exercise. The shadow force holding area will be in the ground floor foyer of Building 915.

The adversary objective for this exercise is to obtain a formula quantity of highly enriched U-235 from the SSNM vault in Building 905 of the B complex at XYZ.

Although a general exercise window and general target area will be announced, security forces will not be informed of the exact time, target, or method of entry of the adversary forces.

At the conclusion of the exercise, all participants (including security force members, LLEA, adversaries, evaluators, controllers, and observers) will assemble for a post-exercise critique.

3. SCENARIO

3.1 Adversary Description

The adversary team personnel are members of a radical group of right-wing extremists with survivalist training and strong sympathies with anti-Zionist movements in the U.S. and abroad. They have been contacted by a third world Arab bloc country in order to acquire weapons-grade SSNM with which to build a limited technology nuclear weapon. One member of this group is regularly employed at XYZ and works within the 905 MAA in the B Complex. This assignment makes the gathering of intelligence relatively simple and leads to the targeting of the material in the 905 Vault.

3.2 Adversary Actions

The approach to the target area is planned to be made by a four-wheel-drive vehicle from the south along County Road 139. The vehicle would travel approximately 1.7 miles over logging trails to a vehicle drop point approximately 800 meters east of the 900 area fence. From there, the adversary forces would travel on foot to the perimeter of the 900 area. After spotting and timing all site roving patrols, the adversary forces would covertly cross the unalarmed outer Protected Area perimeter fence and continue to the inner alarmed Protected Area fence of the B complex. There, they would split, with two two-man security teams moving to ambush positions on Roads 117 and 118 where these routes lead into the B Complex. With security teams in place to interrupt or delay responding site security forces, the main adversary party would cross the outer Protected Area fence, rush across the cleared area, and cross the inner fence into the B Complex.

Once inside, the adversaries would immediately destroy closed circuit television (CCTV) cameras numbers 27A and 27B which monitor the SSNM Vault. They would place prepared flexible linear shaped charges (FLSCs) over the locking mechanism bolt on the vault door and withdraw behind the concrete apron skirting of the vault. Once the charge detonated and the

vault door locking bolt was severed, the adversaries would return to the vault door and open it using the normal throw-bolt handle. Two members of the adversary team would enter the vault and select five cans each of highly-enriched U-235 oxide weighing approximately two kilograms each. They would load the target material into backpacks and withdraw. They would then rejoin the main adversary force at the vault face and retrace their route back over the B Complex fences and the 900 Area perimeter fence and thence to the escape vehicle. Once the main adversary force was clear of the 900 Area perimeter fence, the two adversary security teams would withdraw along the same route providing cover and delay for the main force. Once all surviving members of the adversary force arrived at the escape vehicle, they would travel overland back to County Road 139, and make their escape by means of public roads and highways (see site diagram, Attachment 1).

4. SYSTEMS TO BE EXERCISED

The following systems and personnel will be exercised and/or evaluated:

- a. Responding guards will be exercised in all aspects of cover concealment, tactical movement, fire, and communications.
- b. CAS and Secondary Alarm Station (SAS) personnel will be exercised in communication, coordination, LLEA notification/coordination, off-duty recall, and all other response-related functions.
- c. Supervisory personnel will be exercised in coordination, direction, communication, and all other aspects of their leadership duties under emergency situations.
- d. EECF personnel will be exercised in lock-down, response (as applicable), and all other aspects of their duties under emergency situations.
- e. Perimeter lighting will be evaluated as to its adequacy for use in locating and identifying the adversary forces.
- f. Sensors and alarm systems will be evaluated on the B Complex perimeter intrusion detection and assessment system (PIDAS) as to its adequacy in detecting and assessing the adversary penetration.
- g. The tactical communication system at XYZ will be evaluated concerning its effectiveness in a security contingency.
- h. LLEA effectiveness in isolating the XYZ facility with outer containment road blocks will be evaluated.

5. EXERCISE CONTROL

5.1 Exercise Participants, Vehicles, and Equipment

5.1.1 Adversaries

The adversary force will wear nondescript, locally acceptable clothes and MILES harnesses. However, prior to the onset of hostilities, they may cover MILES harnesses with coveralls or smocks. Once hostilities have been initiated, they must have MILES harnesses and headbands on and uncovered at all times. They will be armed with MILES submachine guns, automatic rifles, and handguns. They will have one vehicle which, in order to remain inconspicuous, will not be MILES-equipped. No member of the adversary force may attempt to enter B Complex or approach closer than the perimeter fence prior to the opening of the exercise window.

Once clear of the exercise area, all adversaries will unload their weapons and place them on the floor boards of the escape vehicle. No weapons will be discharged, displayed, or handled outside of the exercise area. If exercise adversaries are stopped by an LLEA patrol either before or after the assault, they are to immediately identify themselves as exercise participants and cooperate fully with LLEA officers.

5.1.2 Security Forces

All potential responders will wear normal uniforms and MILES harnesses, and will be armed with MILES-equipped handguns in addition to their normally assigned rifle or shotgun. Only those weapons that are normally carried or available will be used.

The CAS and SAS will be outside the exercise boundary insofar as engaging or being engaged in the firefight. CAS/SAS personnel will not be MILES-equipped or armed with MILES-equipped weapons. However, they will participate fully insofar as observation, communication, coordination, command and control, and reporting are concerned.

Door 3A and 3B EECF guards in Building 905 will participate actively in this exercise. They will be armed with MILES-equipped normal weapons. A Complex EECF guards will not participate in this exercise. LLEA personnel will participate only insofar as proceeding to and establishing roadblocks and identifying and stopping the adversary escape vehicle. They will not draw sidearms, display shoulder-fired weapons, or physically arrest the adversaries (adversaries will cooperate fully if stopped by LLEA).

5.2 MILES-Specific Instructions

All potential participants in the firefight portions of this exercise will wear MILES harnesses which will be checked and set prior to the exercise window. All MILES-equipped weapons will be checked and bore-sighted prior to the exercise. No buildings, structures, or vehicles will be MILES harness equipped.

5.3 Off-Limits Areas

A Complex, and the entire facility south of West Gate Road and west of County Road 139 are off-limits to all participants except for travel from the security force holding areas. All off-site areas are off-limits for handling or displaying weapons.

5.4 Controller and Evaluator Assignments, Equipment and Responsibilities

5.4.1 Exercise Coordinator: CPT Cosgrove

Location: CAS

Equipment: Traffic vest, controller radio, and adversary radio.

Responsibilities: Overall exercise control, initiation, and termination.

5.4.2 CAS Evaluator: LT Simms

Location: CAS

Equipment: Traffic vest and controller radio.

Responsibilities: CAS evaluation and message distribution.

5.4.3 SAS Evaluator: LT Smith

Location: SAS

Equipment: Traffic vest and controller radio.

Responsibilities: SAS evaluation.

5.4.4 Security Force Controllers-Evaluators: CPT Rogers, LT Johnson

Location: With response force supervisors

Equipment: Traffic vests, controller radios, and controller guns.

Responsibilities: Security force control and evaluation, security force safety checks, and release of security forces into target when called by CAS or SAS.

5.4.5 Adversary Controllers-Evaluators: SGT Adams, SGT White

Location: With adversary forces

Equipment: Traffic vests, adversary radios, and controller radios, controller guns.

Responsibilities: Adversary control, security force evaluation, adversary force safety checks.

5.4.6 Vault Controller: Mr. Evanson
Location: 905 vault door

Equipment: Traffic vest, controller radio, and simulated target material.

Responsibilities: Hold adversary force for four minutes after they have arrived at vault door to simulate explosive entry. After delay, provide adversary force with simulated target material. Notify CAS evaluator of adversary progress for message distribution.

5.4.7 Visitor-Controller: Mr. Fullbright

Location: Building 901 roof

Equipment: Traffic vest, controller radio, and security force radio.

Responsibilities: Visitor and observer control.

5.4.8 Shadow Force Controller: LT Schmidt

Location: Building 915 with shadow force commander

Equipment: Traffic vest, controller radio, and tactical response force radio.

Responsibilities: Maintain all armed shadow force members inside Building 915. Release shadow force to control of CAS and Site Security Supervisor on order from the Exercise Coordinator.

5.5 Visitors and Observers

All visitors and observers must attend the controller briefing. Thereafter, they will proceed directly to Building 905 escorted by Mr. Fullbright. All visitors and observers will be restricted to the roof of Building 905 for the duration of the exercise.

5.6 Coordinating Instructions

5.6.1 Evaluation

Use evaluator checklists provided and Section 2 of this plan, insofar as security system objectives are concerned. Evaluators will participate in an exercise critique to be held immediately following exercise termination and an exercise report preparation meeting the following day at 1000 hours in the security force training room.

5.6.2 Communications

- a. Security Force: Tactical radios on channel 2 (DVP secure voice)

- b. Adversary Forces: EGG two-channel radios on channel 1. Adversary forces will also have access to a hand-held frequency scanner.
- c. Controllers: EGG multichannel radios on channel 8.

5.6.3 Uniform and Equipment

- a. Security Force: Duty uniform plus MILES
- b. Adversary Forces: No restrictions or requirements other than MILES.
- c. Evaluators and Controllers: Traffic vests will be worn by all. Adversary controllers may conceal traffic vests until the onset of hostilities.

5.6.4 Exercise Initiation

The exercise will be initiated (window opened) by the Exercise Coordinator at 0100 hours or when all positioning and safety requirements have been met. If delays are encountered, the start time will be adjusted. The opening of the exercise window will be announced over all radio nets. Controllers will ensure that players in their vicinity are aware that the exercise window has opened.

5.6.5 Exercise Termination

The exercise will be terminated by the Exercise Coordinator when one or more of the following occur:

- a. All adversaries are neutralized or have given up the mission and escaped.
- b. The escape vehicle has been "captured" at an LLEA roadblock.
- c. The escape vehicle clears all outer containment roadblocks.
- d. XYZ management determines that an actual condition exists (i.e., safety, security, or operations) which cannot be quickly corrected and is of such magnitude as to preclude continuation of the exercise.

5.6.6 Sequence of Events

<u>Time</u>	<u>Event</u>	<u>Location</u>
1600-1700	Evaluator Briefing	Building 601 Classroom
1700-1800	Joint Evaluator and Controller Briefing	Building 601 Classroom
2000-2200	Adversary and Security Force Equipment Issue and Checks	Small Arms Range
2200-2230	Adversary Control Plan Briefing	Building 601 Classroom
2230-2300	Joint Safety and Rules of Conduct Briefing	Building 601 Classroom
2300-2330	Security Force Control Plan Briefing	Building 601 Classroom
2300-2330	Adversary Positioning	Exercise Area
2330-2400	Security Force Positioning	Exercise Area
0100-	Exercise Window Opens	Exercise Area
-0600	Exercise Window Closes (LATEST)	Exercise Area
TBA	Post Exercise Critique	Building 601 Classroom

5.6.7 Messages

a. Message #1

Time: As announced after fence PIDAS alarms.

From: CAS Controller/Evaluator

To: CAS Supervisor

"THIS IS A DRILL - YOU HAVE JUST LOST THE PICTURES ON CAMERAS 27A and 27B."

b. Message #2

Time: As requested by Vault Controller

From: CAS Evaluator/Controller

To: CAS Supervisor

"THIS IS A DRILL - YOU HAVE JUST RECEIVED A DOOR ALARM FROM THE 905 VAULT. YOU ARE NOW RECEIVING INTERIOR INTRUSION ALARMS."

6. SAFETY

This exercise will be conducted in accordance with the accompanying "Force-on-Force Exercise Safety Plan" and with the XYZ Plant Safety SOP. Responding security force and adversary leaders are responsible for ensuring that all participating forces conduct themselves in a safe manner and in accordance with XYZ Plant safety procedures. The Administration and Services Division will ensure that plant fire and medical sections are alerted to the exercise.

Approved: (signature)
Exercise Coordinator

(signature)
XYZ Security Manager

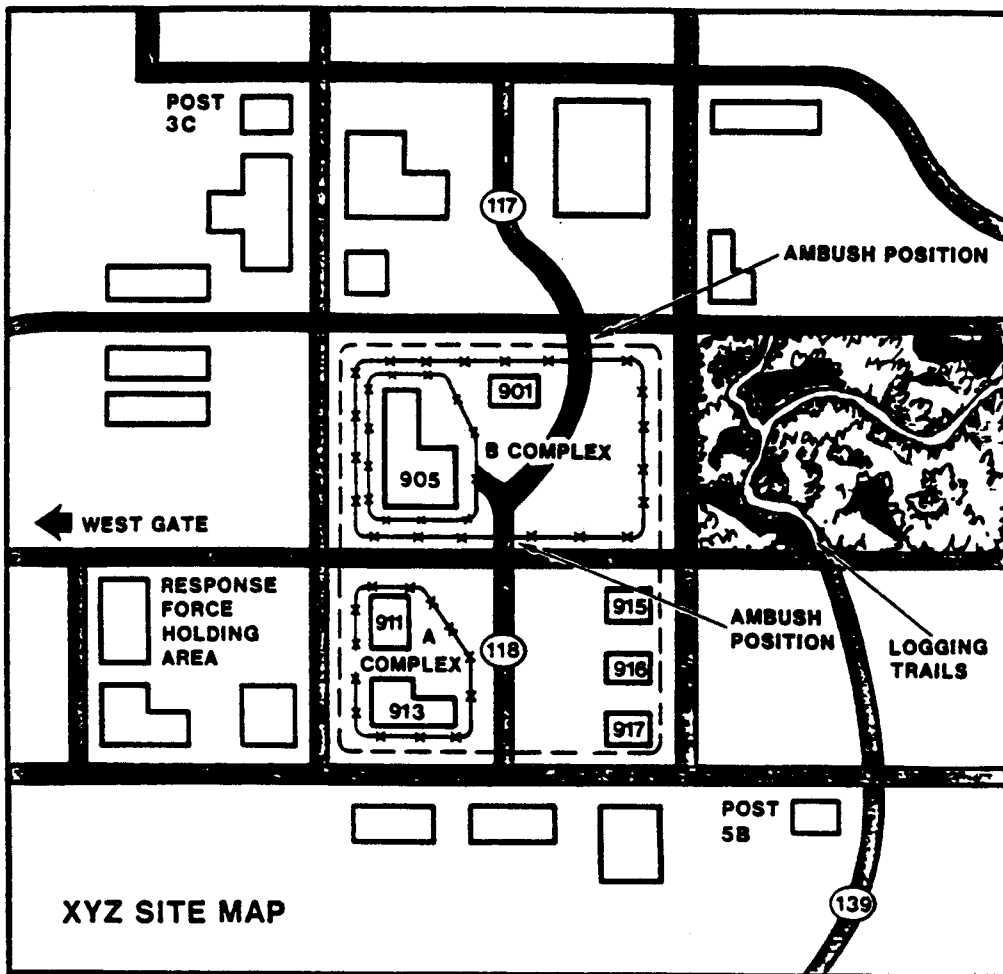
(signature)
XYZ Safety Manager

(signature)
XYZ Manager's Representative

ATTACHMENT 1
TO
APPENDIX C
XYZ SITE MAP

CLASSIFICATION

ATTACHMENT 1



CLASSIFICATION

APPENDIX D

EXAMPLE FORCE-ON-FORCE RULES OF CONDUCT

APPENDIX D

EXAMPLE FORCE-ON-FORCE RULES OF CONDUCT

1. The adversaries must actually escape with simulated target material in order to succeed. Effective escape is defined as getting outside of police road blocks without being subjected to direct fire or hot pursuit.
2. Both sides may use vehicles. If the vehicles are not MILES-equipped, hits will be scored by evaluators or controllers.
3. Players will follow all instructions given by controllers.
4. All players should avoid unnecessarily damaging property.
5. If it is necessary to halt problem play, an announcement will be made over all radio nets and a signal may be given by means of the continuous sounding of a vehicle horn.
6. If problem play is temporarily halted, all players will stop in their locations and cease fire, movement, communication, and other action.
7. No player may have access to an opponent's radio prior to the initiation of the exercise.
8. Once disabled, a player must immediately cease fire, movement, communication, and other action. The player should turn off his/her weapon, silence his/her harness, and remain in place until the test is terminated.
9. If a vehicle is destroyed, all occupants are considered out of action. They cannot dismount the vehicle, continue firing, or make radio calls.
10. No physical contact between opponents is permitted. No two opponents are permitted to approach within five feet of each other except that if one has been "killed," the other may approach to take the fallen opponent's radio, weapon, ammunition, vehicle keys, etc.
11. CAS and SAS personnel may not engage in exercise-related intelligence-gathering efforts prior to the exercise window.
12. Persons deliberately attempting to circumvent these rules or gain an unfair advantage by any unrealistic tactic (such as covering laser sensors, hiding behind cardboard, and removing headbands) will be taken out of action by a Controller. Persons ignoring safety rules likewise will be taken out of play.

APPENDIX E

EXAMPLE FORCE-ON-FORCE SAFETY PLAN

APPENDIX E

EXAMPLE FORCE-ON-FORCE SAFETY PLAN

1. INTRODUCTION

This exercise will be conducted within the rules set down in this plan and in the accompanying FOF Exercise Control Plan and Rules of Conduct. The Exercise Coordinator is the senior safety officer, and all controllers and evaluators are specifically designated as assistant safety officers. Any safety officer or assistant safety officer observing any unsafe act or condition will immediately take corrective action or cause exercise play to be suspended until corrective action can be taken.

2. SPECIFIC SAFETY CONSIDERATIONS

2.1 Weapons and Munitions Safety

- 2.1.1 No live-fire weapons of any type will be allowed in the exercise play area, unless the personnel having such weapons are under the direct observation and supervision of a controller.
- 2.1.2 All weapons used in the exercise shall be equipped with blank-fire adapters.
- 2.1.3 All 5.56mm magazines shall have live-round excluders installed.
- 2.1.4 Shotgun barrels shall have live-round excluders installed.
- 2.1.5 MILES-modified revolvers are the only handguns allowed in the exercise play area.
- 2.1.6 No live ammunition of any type or caliber will be brought into the exercise play area, unless it is under the direct supervision of a controller or is secured so as to be inaccessible during the exercise, unless an actual security emergency arises during such exercise.
- 2.1.7 No LAW will be fired until the area 30 feet behind and five (5) feet to each side of the weapon is cleared.
- 2.1.8 No gas, smoke, simulator, or other types of exploding or burning munitions, other than approved blank ammunition, will be used.
- 2.1.9 No weapon shall be intentionally fired when the muzzle is within five (5) feet of another person.
- 2.1.10 Players shall not point a weapon toward another player's eyes within 10 feet of that player.

2.2 Personnel Safety

- 2.2.1 No attempt will be made to disarm an adversary by grabbing his or her weapon.
- 2.2.2 All ascents to or descents from elevated positions shall be by ladder, stairway or other safe method, to the extent possible. There shall be consideration in planning the exercise to assure that, to the extent possible, there is no jumping from elevated positions.
- 2.2.3 All XYZ health physics regulations and procedures shall be followed.
- 2.2.4 All construction and excavation areas shall be avoided.
- 2.2.5 Each player must monitor his or her own condition for signs of overexertion.
- 2.2.6 All injuries shall be reported immediately to the nearest controller or evaluator.
- 2.2.7 Any person observing an injured player or one who obviously is ill shall immediately cease problem play and render assistance.

2.3 Vehicle Safety

- 2.3.1 No vehicle shall be driven in a manner that posted speed limits are exceeded or safe driving rules are violated.
- 2.3.2 Only those vehicles involved in the exercise shall be used for movement.
- 2.3.3 Vehicles may not be mounted or dismounted until they come to a full stop.
- 2.3.4 Players should be careful to avoid the vicinity of the flash-bang simulators on vehicle systems if the vehicles are MILES-equipped.

3. RESPONSIBILITIES

3.1 Individual

- 3.1.1 Inspect and load his/her own ammunition after it has been approved by a safety officer.
- 3.1.2 Personally and individually take responsibility for the safe use of his/her weapon.
- 3.1.3 Personally and individually take responsibility for monitoring his/her own physical condition.

3.2 Team Leaders

- 3.2.1 Personally inspect all weapons, magazines, and ammunition assigned to members of their team for compliance with Section 2 of this plan.
- 3.2.2 Report the results of these inspections to the Force Controller/Evaluator.
- 3.2.3 Ensure that all personnel under their control comply with the requirements of this plan and with common sense safety practices.
- 3.2.4 Correct, either by personal intervention or by reporting to a controller/evaluator, any unsafe act that occurs during the test.

3.3 Controllers/Evaluators

- 3.3.1 Report the results of force commander safety inspections to the Exercise Coordinator prior to the beginning of the exercise.
- 3.3.2 Ensure that all personnel on the force to which they are assigned comply with the requirements of this plan and with common sense safety precautions.
- 3.3.3 Correct, either by personal intervention or by reporting to the Exercise Coordinator, any unsafe act that occurs during the exercise.
- 3.3.4 Suspend exercise play any time that an uncorrectable safety hazard appears.

4. SAFETY SUPPORT

XYZ Safety Department will ensure that adequate medical coverage, to include an immediately available ambulance, is provided for the duration of this exercise.

APPENDIX F

EXAMPLE FORCE-ON-FORCE EXERCISE PREPARATION CHECKLIST



APPENDIX F

EXAMPLE FORCE-ON-FORCE EXERCISE PREPARATION CHECKLIST

DATE _____

	<u>YES</u>	<u>NO</u>
1. PLANNING AND COORDINATION		
a. Adequate provision to equip all appropriate forces, facilities, and vehicles with MILES?	___	___
b. Adequate exercise communications equipment available?	___	___
c. Actual environment adequately simulated by test environment?	___	___
d. Adequate provisions to ensure safety?	___	___
e. Adequate provisions to ensure facility security during test?	___	___
f. Exercise rating system provided to security forces?	___	___
g. Adequate overall planning and coordination?	___	___
2. SCENARIO REALISM AND CREDIBILITY		
a. Adversary force representative of design basis threat?	___	___
b. Security force mission appropriate?	___	___
c. Success-failure criteria clearly established?	___	___
d. Success-failure criteria mission-specific?	___	___
e. Exercise fair and impartial (i.e., no predetermined outcome)?	___	___

	<u>YES</u>	<u>NO</u>
f. Time-and-event lines realistic and supportable?	—	—
g. All aspects of test discussed among evaluators, adversary representatives, and security personnel to fullest extent practical?	—	—
 3. EXERCISE CONTROL AND EVALUATION		
a. Adequate control plan?	—	—
b. Adequate control personnel and deployment?	—	—
c. Adequate evaluation personnel and deployment?	—	—
d. Adequate pre-exercise briefings?	—	—
e. Adequate control during exercise?	—	—
f. Adequate overall exercise control and evaluation?	—	—
 4. EXERCISE ADMINISTRATION		
a. Adequate written scenarios?	—	—
b. Adequate written exercise control plan?	—	—
c. Adequate written rules of conduct?	—	—
d. Adequate written safety plan?	—	—
e. Adequate evaluator checklist?	—	—
f. Adequate post-exercise data analysis?	—	—
g. Adequate post-exercise documentation?	—	—
h. Adequate critiques?	—	—

APPENDIX G

EXAMPLE BRIEFING LESSON PLANS

APPENDIX G

EXAMPLE BRIEFING LESSON PLANS

Thorough pre-exercise briefings for all exercise participants, controllers, and evaluators are crucial to successful and safe conduct of tactical response team exercises. Attachments 1 through 4 to this Appendix provide sample briefing lesson plans for adversary team members, the security force, controllers, and evaluators, respectively.

ATTACHMENT 1

TO

APPENDIX G

EXAMPLE ADVERSARY TEAM BRIEFING LESSON PLAN

ATTACHMENT 1

TO

APPENDIX G

EXAMPLE ADVERSARY TEAM BRIEFING LESSON PLAN

1. INTRODUCTION

- a. Personal introductions.
- b. Purpose of briefing.
- c. Purpose of exercise (read verbatim from Exercise Control Plan).

2. ADVERSARY ROLE

- a. Goal is to improve system.
- b. Try to defeat system but play by rules.
- c. Play part as described to best of ability.
- d. Behave realistically (no suicidal actions).
- e. Play part in fair, objective system test.
- f. Provide realistic training for fellow security force personnel.
- g. "Remember, next time you may be on other side."

3. SCENARIO

- a. Review adversary description, goals, and motivation.
- b. Review proposed actions.
- c. Cover allowable and prohibited variations.
- d. Final discussion of adversary plans.

4. SIMULATION

- a. Pre-positioning.
- b. Vault delay times.
- c. Miscellaneous.

5. RULES OF CONDUCT (READ VERBATIM AND DISCUSS)

6. SAFETY (READ SAFETY PLAN VERBATIM AND DISCUSS)

7. OFF-LIMITS AREAS (COVER ON-SITE DIAGRAM AND DISCUSS)

8. SEQUENCE OF EVENTS

9. CONTROLLER ASSIGNMENTS

10. QUESTIONS/DISCUSSION

11. CONCLUSION

- a. Play role realistically.
- b. Play safely.
- c. Play by rules.

ATTACHMENT 2

TO

APPENDIX G

EXAMPLE SECURITY FORCE BRIEFING LESSON PLAN

ATTACHMENT 2

TO

APPENDIX G

EXAMPLE SECURITY FORCE BRIEFING LESSON PLAN

1. INTRODUCTION

- a. Personal introductions.
- b. Purpose of briefing.
- c. Purpose of exercise (Read verbatim from Exercise Control Plan).

2. ADVERSARIES

- a. Who they are.
- b. What their role is.
- c. What rules they play by.

3. SCENARIO

- a. Exercise area.
- b. Exercise window.
- c. Potential adversary targets.

4. SIMULATION

- a. Potential prepositioning.
- b. MILES equipment.
- c. Tactical Response Team holding area.
- d. Miscellaneous.

5. RULES OF CONDUCT (READ VERBATIM AND DISCUSS)

6. SAFETY (READ SAFETY PLAN VERBATIM AND DISCUSS)
7. OFF-LIMITS AREAS (COVER ON-SITE DIAGRAM AND DISCUSS)
8. SEQUENCE OF EVENTS
9. CONTROLLER/EVALUATOR ASSIGNMENTS
10. QUESTIONS/DISCUSSION
11. CONCLUSION
 - a. Play realistically.
 - b. Play safely.
 - c. Play by rules.

ATTACHMENT 3

TO

APPENDIX G

EXAMPLE CONTROLLER BRIEFING LESSON PLAN

ATTACHMENT 3

TO

APPENDIX G

EXAMPLE CONTROLLER BRIEFING LESSON PLAN

1. INTRODUCTION

- a. Personal introductions.
- b. Purpose of briefing.
- c. Purpose of exercise (read verbatim from Exercise Control Plan).

2. EXERCISE CONCEPT (READ VERBATIM FROM EXERCISE CONTROL PLAN)

3. CONTROLLER RESPONSIBILITIES

- a. Exercise simulation.
- b. Participant control.
- c. Safety.

4. SCENARIO

- a. Review adversary description and proposed actions.
- b. Cover allowable and prohibited variations.
- c. Questions and discussion.

5. SIMULATION

- a. Adversary repositioning.
- b. Tactical Response Team holding area and release times.
- c. Vault delay times.
- d. Messages.
- e. Miscellaneous.

6. RULES OF CONDUCT (READ VERBATIM AND DISCUSS)
7. SAFETY (READ SAFETY PLAN VERBATIM AND DISCUSS)
8. OFF-LIMITS AREAS (COVER ON-SITE DIAGRAM AND DISCUSS)
9. SEQUENCE OF EVENTS
10. CONTROLLER ASSIGNMENTS AND INDIVIDUAL RESPONSIBILITIES
(FROM EXERCISE CONTROL PLAN)
11. PAIRING UP WITH ASSIGNED FORCES
12. QUESTIONS AND DISCUSSION
13. CONCLUSION
 - a. Importance of controller function.
 - b. Controller responsibilities.
 - c. Safety responsibilities.

ATTACHMENT 4

TO

APPENDIX G

EXAMPLE EVALUATOR BRIEFING LESSON PLAN

ATTACHMENT 4

TO

APPENDIX G

EXAMPLE EVALUATOR BRIEFING LESSON PLAN

1. INTRODUCTION

- a. Personal introductions.
- b. Purpose - familiarization with evaluation procedures--not an exercise briefing.
- c. Evaluator's job - observe performance of security system and make objective judgments on how well the system accomplished its mission.
- d. Evaluator importance - much time and money being spent to allow you to observe and evaluate.

2. EVALUATION PHILOSOPHY

- a. Goal - an objective, performance-based evaluation.
- b. Guidelines
 - (1) Evaluate based on what you see, hear, or can reasonably infer. Don't guess.
 - (2) Remain neutral.
 - (3) Do not influence the outcome (be invisible and silent).
 - (4) Position or reposition yourself for best observation.
 - (5) Don't judge by your method or tactic, or by how you would have done it.
 - (6) Judge on how well the job is done, not how it is done.
 - (7) Give objective, performance-based evaluation.
 - (8) Success doesn't mean everything was done right. Failure doesn't mean everything was done wrong.

3. EVALUATOR CHECKLISTS

- a. Organization - one standard and its supporting criteria per page.
- b. Criteria Elements
 - (1) Each has sub-elements (questions).
 - (2) Sub-elements are indicators, things to look for.
- c. Ratings
 - (1) A place is allotted to rate each sub-element.
 - (2) Overall (last line) is the rating for entire standard (as evidenced by the criteria on the checklist).
- d. Comment/Justification - at end of each section.

4. STANDARDS, CRITERIA, AND RATINGS

- a. General
 - (1) Criteria are essentially the same as used for several years in DOE performance evaluations.
 - (2) Now more formalized and modified for NRC licensees.
 - (3) Removes some subjectivity, but not all.
- b. Objectives of System - The purpose or objective of a system or system element. What it is supposed to do (what, not how).
- c. Criteria
 - (1) The elements of performance in a particular area.
 - (2) Things to look for to help decide if, and how well the standard has been achieved.
 - (3) Criteria stated as questions on checklist.
- d. Rating Statements
 - (1) Discuss what level of performance or quality of performance is required to achieve the various ratings (strong, adequate, etc.).
 - (2) Communications, planning (read and explain as examples).
 - (3) Overall FOF (read and explain - different from others).

5. COMPLETING EVALUATOR CHECKLISTS

- a. Ratings - assigned as explained.
- b. Not Applicable - use if appropriate - do not guess.
- c. Criteria - evaluate each criterion possible, but remember rating of the overall standard is only real rating for each category.
- d. Overall Category Rating - not a mathematical average of the criteria.
- e. Comment/Justification
 - (1) Must fully explain every rating in space provided.
 - (2) Note good and bad, and explain to what degree the standard was met.
 - (3) Each rating must be explained/justified or it will be disregarded in after action report.
 - (4) Narrative comments are also important to the after action report writing process.
- f. Influence of Exercise Outcome
 - (1) Rate separate standards independently as much as possible.
 - (2) Don't let success or failure of security system in the test unduly influence separate standard area ratings.
- g. Conformity - any rating not in line with established standard and rating statements, or not substantiated, will be discarded.
- h. Example Evaluator Checklist
 - (1) Has examples of each possible rating.
 - (2) Narrative gives approximation of the kind of information and level of detail needed.

APPENDIX H

EXAMPLE FORCE-ON-FORCE EVALUATOR CHECKLISTS

APPENDIX H

EXAMPLE FORCE-ON-FORCE EVALUATOR CHECKLISTS

Attachments 1 and 2 to this appendix provide a blank checklist and a completed checklist, respectively. These checklists should be referred to by evaluators in completing the exercise evaluation.

ATTACHMENT 1

TO

APPENDIX H

EXAMPLE FORCE-ON-FORCE EVALUATOR CHECKLIST (BLANK)

ATTACHMENT 1

TO

APPENDIX H

EXAMPLE FORCE-ON-FORCE EVALUATOR CHECKLIST (BLANK)

	<u>Evaluation</u>			
	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
1. <u>Coordination, Command and Control</u>				
1.1 Was coordination and command authority within the security force clear and effective?	_____	_____	_____	_____
1.2 Was coordination between security and LLEA clear and effective?	_____	_____	_____	_____
1.3 Were plans and procedures made for authority in depth?	_____	_____	_____	_____
1.4 Did all personnel know and understand the lines of authority?	_____	_____	_____	_____
1.5 Were supervisors able to control security forces?	_____	_____	_____	_____
1.6 Were exchanges of authority and/or transfer of responsibilities appropriate, timely and effective?	_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
1.7 Were exchanges of authority and/or transfer of responsibilities accompanied by adequate situation briefings?	_____	_____	_____	_____

Standard:

Did overall coordination, command and control contribute to or detract from the resolution of this contingency?	_____	_____	_____	_____
---	-------	-------	-------	-------

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
2.	<u>Planning</u>				
2.1	Were prior response plans developed for the security force to deal with this type of contingency?	_____	_____	_____	_____
2.2	Were these plans specific?	_____	_____	_____	_____
2.3	Were prior plans developed for use of LLEA?	_____	_____	_____	_____
2.4	Was available time used for planning?	_____	_____	_____	_____
2.5	Were plans mission-oriented?	_____	_____	_____	_____
2.6	Were all plans viable?	_____	_____	_____	_____
2.7	Were necessary improvised plans rapidly developed?	_____	_____	_____	_____
2.8	Did all personnel understand the plans?	_____	_____	_____	_____
2.9	Were plans clear, complete and concise?	_____	_____	_____	_____
2.10	Were available contingency checklists appropriately utilized?	_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

Needs Not
Improvement Adequate Strong Applicable

Standard:

Did overall planning contribute to or detract from the resolution of this contingency? _____

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
3.	<u>Communications</u>				
3.1	Were communications between CAS/SAS and security forces effective?	_____	_____	_____	_____
3.2	Were communications between supervisors and the security force effective?	_____	_____	_____	_____
3.3	Were communications between security force members effective?	_____	_____	_____	_____
3.4	Were communications between CAS/SAS and LLEA effective?	_____	_____	_____	_____
3.5	Were radio communications relied on too heavily?	_____	_____	_____	_____
3.6	Were alternate means of communications used appropriately?	_____	_____	_____	_____
3.7	Was communications security discipline maintained?	_____	_____	_____	_____
3.8	Was radio circuit discipline maintained?	_____	_____	_____	_____
3.9	Were codes and authentication systems used where appropriate?	_____	_____	_____	_____
3.10	Were all communications understandable and efficient?	_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

Needs Adequate Strong Not
Improvement Applicable

Standard:

Did communications
contribute to or detract
from the overall resolution
of this contingency?

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
4. <u>Individual Tactics</u>				
4.1 Were the best available cover and concealment used appropriately?	_____	_____	_____	_____
4.2 Were selected firing positions tactically sound?	_____	_____	_____	_____
4.3 Was minimum exposure maintained during firing?	_____	_____	_____	_____
4.4 Were danger areas crossed tactically?	_____	_____	_____	_____
4.5 Was noise and light discipline maintained?	_____	_____	_____	_____
4.6 Was key terrain appropriately utilized?	_____	_____	_____	_____
Standard:				
Overall, did individual tactics contribute to or detract from the resolution of this contingency?	_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
5.	<u>Team Tactics</u>				
5.1	Did the security force work together as a team?	_____	_____	_____	_____
5.2	Did responders complement security force personnel already on the scene?	_____	_____	_____	_____
5.3	Were covered and concealed routes used in the response?	_____	_____	_____	_____
5.4	Were alternate response routes planned or used?	_____	_____	_____	_____
5.5	Were tactical formations and dispersion used?	_____	_____	_____	_____
5.6	Did movement techniques provide for dispersion and mutually supporting fire?	_____	_____	_____	_____
5.7	Were supporting fires used effectively?	_____	_____	_____	_____
5.8	Were security vehicles used effectively to block or pursue the escaping adversaries?	_____	_____	_____	_____
5.9	Did the security force gain control over key terrain?	_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

Needs Adequate Strong Not
Improvement

Standard:

Overall, did team tactics contribute to or detract from the resolution of this contingency?

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
6. <u>Application of Force</u>				
6.1 Was the minimum necessary level of force used to prevent facility penetration?	_____	_____	_____	_____
6.2 Was the minimum necessary level of force used to prevent adversary escape?	_____	_____	_____	_____
6.3 Was the use of excessive force avoided?	_____	_____	_____	_____
6.4 Was the applied force effective in minimizing danger to security force and non-hostile personnel?	_____	_____	_____	_____
6.5 Did all personnel maintain fire control and fire discipline, using appropriate tactics, target acquisition and selective fire?	_____	_____	_____	_____
6.6 Did conditions justifying the use of deadly force reasonably appear to exist before deadly force was applied?	_____	_____	_____	_____

Standard:

Overall, did the application of force contribute to or detract from the resolution of this contingency and was it applied in accordance with applicable law?

CLASSIFICATION WHEN COMPLETED

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

CLASSIFICATION WHEN COMPLETED

		<u>Needs</u> <u>Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not</u> <u>Applicable</u>
7.	<u>Intelligence</u>				
7.1	Was immediately available intelligence exploited?	_____	_____	_____	_____
7.2	Was intelligence immediately disseminated to the security force and to the CAS/SAS and supervisors?	_____	_____	_____	_____
7.3	Was all available and appropriate intelligence passed to LLEA?	_____	_____	_____	_____
7.4	Did the security force recognize important intelligence and take advantage of it? (e.g., adversary description, weapons, escape routes, etc.)	_____	_____	_____	_____
Standard:					
	Did intelligence gathering and dissemination contribute to or detract from the overall resolution of this contingency?	_____	_____	_____	_____

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
8. <u>Security Force Discipline</u>				
8.1 Were security force members responsive to supervisors?	_____	_____	_____	_____
8.2 Were pre-exercise preparations conducted in a professional manner?	_____	_____	_____	_____
8.3 Were exercise conduct and safety rules observed?	_____	_____	_____	_____
8.4 Did security force members maintain a positive, confident attitude and professional conduct?	_____	_____	_____	_____
Standard:				
Did security force discipline contribute to or detract from the overall resolution of this contingency?	_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
9. <u>Response and Denial or Containment</u>				
9.1 Was response timely?	_____	_____	_____	_____
9.2 Was denial or containment effective?	_____	_____	_____	_____
9.3 Were there provisions for denial or containment in depth?	_____	_____	_____	_____
9.4 Were all appropriate forces used?	_____	_____	_____	_____
9.5 Was LLEA containment effective?	_____	_____	_____	_____
9.6 If initial containment personnel were relieved by responders, was transfer of responsibility effective?	_____	_____	_____	_____
9.7 If containment failed, was pursuit timely and effective?	_____	_____	_____	_____
Standard:				
Did response and denial or containment contribute to or detract from the overall resolution of this contingency?	_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
10.	<u>Physical Security Systems and Geography</u>				
10.1	Do physical security systems complement the tactical capabilities of the security force?	_____	_____	_____	_____
10.2	Do sensor and alarm systems provide for sufficiently early detection of penetration to allow effective security force response?	_____	_____	_____	_____
10.3	Do assessment systems provide sufficient information about adversaries to allow security forces to interdict adversary actions?	_____	_____	_____	_____
10.4	Are tactical communications equipment systems adequate?	_____	_____	_____	_____
10.5	Are security force vehicles and weapons appropriate, capable, serviceable, and functional?	_____	_____	_____	_____
10.6	Do barriers provide denial or sufficient delay to allow successful security force deployment?	_____	_____	_____	_____
10.7	Do response team-to-target distances provide time for security forces to interdict an adversary?	_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
10.8	Are alternate routes-to-target areas available?	_____	_____	_____	_____
10.9	Are any inadequate systems or equipment compensated for by the strength of other systems?	_____	_____	_____	_____

Standard:

Does overall physical plant and security equipment provide a credible opportunity for the security force to accomplish its mission?

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
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11. Other Considerations

Standard:

Did factors other than the previously listed considerations have a significant impact on the achievement of the overall security objective of this exercise? If so, explain and estimate impact.

COMMENTS AND EVALUATION JUSTIFICATION

CLASSIFICATION WHEN COMPLETED

Needs Not
Improvement Adequate Strong Applicable

12. Overall Evaluation

Standard:

Did overall security performance indicate effectiveness in dealing with a contingency of this particular type?

COMMENTS AND EVALUATION JUSTIFICATION

Evaluator's Name and Signature



ATTACHMENT 2

TO

APPENDIX H

EXAMPLE FORCE-ON-FORCE EVALUATOR CHECKLIST (COMPLETED)

ATTACHMENT 2

TO

APPENDIX H

EXAMPLE FORCE-ON-FORCE EVALUATOR CHECKLIST (COMPLETED)

	<u>Evaluation</u>			
	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
1. <u>Coordination, Command and Control</u>				
1.1 Was coordination and command authority within the security force clear and effective?	_____	<u> X </u>	_____	_____
1.2 Was coordination between security and LLEA clear and effective?	_____	<u> X </u>	_____	_____
1.3 Were plans and procedures made for authority in depth?	_____	<u> X </u>	_____	_____
1.4 Did all personnel know and understand the lines of authority?	<u> X </u>	_____	_____	_____
1.5 Were supervisors able to control security forces?	_____	_____	<u> X </u>	_____
1.6 Were exchanges of authority and/or transfer of responsibilities appropriate, timely and effective?	<u> X </u>	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
1.7 Were exchanges of authority and/or transfer of responsibilities accompanied by adequate situation briefings?	_____	<u> X </u>	_____	_____

Standard:

Did overall coordination, command and control contribute to or detract from the resolution of this contingency?	_____	<u> X </u>	_____	_____
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COMMENTS AND EVALUATION JUSTIFICATION

The Area Supervisor was clearly in command of the guards in the problem area, and the TRT Cdr was clearly in charge of the TRT response. Both seemed to be aware of the assets at their disposal and attempted to use them best advantage. The TRT Cdr decided to take charge of the overall situation prematurely, without being fully briefed about the on-scene situation. His decision to assume command was not clearly understood or widely disseminated. Consequently, some guards were issued conflicting instructions from the TRT Cdr and Area Supervisor, resulting in confusion for about 10 minutes, during which time some positions the TRT Cdr thought were manned were in fact not occupied. The confusion was recognized and identified by an alert guard, and the problem was corrected before it resulted in any adverse impact on the mission. Overall, command and control were effective, and security assets were used in a coordinated manner.

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
2.	<u>Planning</u>				
2.1	Were prior response plans developed for the security force to deal with this type of contingency?	_____	_____	_____X_____	_____
2.2	Were these plans specific?	_____	_____	_____X_____	_____
2.3	Were prior plans developed for use of LLEA?	_____	_____X_____	_____	_____
2.4	Was available time used for planning?	_____	_____	_____X_____	_____
2.5	Were plans mission-oriented?	_____	_____X_____	_____	_____
2.6	Were all plans viable?	_____	_____X_____	_____	_____
2.7	Were necessary improvised plans rapidly developed?	_____	_____	_____X_____	_____
2.8	Did all personnel understand the plans?	_____	_____X_____	_____	_____
2.9	Were plans clear, complete and concise?	_____	_____X_____	_____	_____
2.10	Were available contingency checklists appropriately utilized?	_____	_____	_____	_____X_____

CLASSIFICATION WHEN COMPLETED

Needs Not
Improvement Adequate Strong Applicable

Standard:

Did overall planning contribute to or detract from the resolution of this contingency?

_____ _____ X _____

COMMENTS AND EVALUATION JUSTIFICATION

The TRT had well thought-out and tested contingency plans for all potential targets. This allowed a rapid response, with all TRT members knowing what to do initially. From what I could see and hear, the guards who made the initial response did so on the basis of established contingency plans.
While enroute to the scene, the TRT Cdr monitored reports from the scene and adjusted his plans accordingly. TRT plans were specific to each potential target area but general enough to allow adjustment to the specific situation. Prior and ad hoc planning was timely, mission oriented, and allowed the TRT to respond and function in a smooth, organized, and effective manner.

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
3. <u>Communications</u>				
3.1 Were communications between CAS/SAS and security forces effective?	_____	<u> X </u>	_____	_____
3.2 Were communications between supervisors and the security force effective?	_____	<u> X </u>	_____	_____
3.3 Were communications between security force members effective?	<u> X </u>	_____	_____	_____
3.4 Were communications between CAS/SAS and LLEA effective?	_____	_____	_____	<u> X </u>
3.5 Were radio communications relied on too heavily?	_____	<u> X </u>	_____	_____
3.6 Were alternate means of com- munications used appropriately?	_____	_____	_____	<u> X </u>
3.7 Was communications security discipline maintained?	<u> X </u>	_____	_____	_____
3.8 Was radio circuit discipline maintained?	<u> X </u>	_____	_____	_____
3.9 Were codes and authentication systems used where appropriate?	<u> X </u>	_____	_____	_____
3.10 Were all communications under- standable and efficient?	_____	<u> X </u>	_____	_____

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
Standard:				
Did communications contribute to or detract from the overall resolution of this contingency?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>

COMMENTS AND EVALUATION JUSTIFICATION

The TRT relied exclusively on radio due to their mobile status. Planning and training resulted in good circuit discipline. However, there was too much unnecessary talk by guards. There were frequent "body counts" to see if everyone was OK, and constant checking and rechecking to see if people were in position and if they saw any adversary activity. This hampered communication between the TRT Cdr and Area Supervisor, and was partially responsible for the confusion over who was in command. Security discipline was unsatisfactory. Instructions and friendly positions were given in the clear. This may have resulted in the adversaries locating and eliminating at least one guard. Some codes were used by the TRT; no authentication was attempted by anyone. Lack of authentication procedures resulted in a portion of the TRT being diverted when an adversary used a captured radio to announce "three charlies over the north fence." Although the security force was able to communicate sufficiently to resolve the immediate contingency, that outcome was placed in jeopardy by weaknesses in communications security and discipline.

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
4. <u>Individual Tactics</u>				
4.1 Were the best available cover and concealment used appropriately?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>
4.2 Were selected firing positions tactically sound?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
4.3 Was minimum exposure maintained during firing?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
4.4 Were danger areas crossed tactically?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
4.5 Was noise and light discipline maintained?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>
4.6 Was key terrain appropriately utilized?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
Standard:				
Overall, did individual tactics contribute to or detract from the resolution of this contingency?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>

CLASSIFICATION WHEN COMPLETED

COMMENTS AND EVALUATION JUSTIFICATION

Two guards were disabled by a sniper because they were not using cover which was readily available. This created a hole in the inner containment and allowed the adversaries to reach the fence. Several guards and one TRT member crossed open areas without making use of available cover and without covering fire. Others were observed making good use of cover. Noise discipline was good except for radio sound. The TRT had EARCOM, but guards did not and I was able to locate the positions of 3 guards by sound because their radios were too loud. Light discipline was excellent. It was a very dark night, and with all the personnel and vehicles involved, I did not observe one case where improper light discipline compromised the friendly situation. The above weaknesses in basic individual tactics handicapped the security force efforts at dealing with the adversaries but did not directly affect overall mission accomplishment.

CLASSIFICATION WHEN COMPLETED

	<u>Needs</u> <u>Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not</u> <u>Applicable</u>
5. <u>Team Tactics</u>				
5.1 Did the security force work together as a team?	_____	<u> X </u>	_____	_____
5.2 Did responders complement security force personnel already on the scene?	_____	<u> X </u>	_____	_____
5.3 Were covered and concealed routes used in the response?	_____	<u> X </u>	_____	_____
5.4 Were alternate response routes planned or used?	_____	<u> X </u>	_____	_____
5.5 Were tactical formations and dispersion used?	<u> X </u>	_____	_____	_____
5.6 Did movement techniques provide for dispersion and mutually supporting fire?	_____	<u> X </u>	_____	_____
5.7 Were supporting fires used effectively?	_____	<u> X </u>	_____	_____
5.8 Were security vehicles used effectively to block or pursue the escaping adversaries?	_____	<u> X </u>	_____	_____
5.9 Did the security force gain control over key terrain?	_____	_____	_____	<u> X </u>

CLASSIFICATION WHEN COMPLETED

Needs Adequate Strong Not
Improvement Applicable

Standard:

Overall, did team tactics contribute to or detract from the resolution of this security contingency?

_____ X _____ _____

COMMENTS AND EVALUATION JUSTIFICATION

There were no realistic covered or concealed routes to the target area.
However, the TRT did reconnoiter the route with ground vehicles. Alternate routes were known, but not considered viable options because of the increased distances. Once on foot, the TRT generally used good routes with cover or concealment. TRT formations and dispersion were generally good. However, upon arriving at the scene, the occupants of one TRT vehicle momentarily clustered at the rear of their vehicle, where a burst of hostile fire disabled one of them. Generally speaking, TRT efforts were coordinated, their tactics were good, and their efforts were effectively directed against the adversaries.

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
6.	<u>Application of Force</u>				
6.1	Was the minimum necessary level of force used to prevent facility penetration?	_____	_____	_____	_____X_____
6.2	Was the minimum necessary level of force used to prevent adversary escape?	_____	_____X_____	_____	_____
6.3	Was the use of excessive force avoided?	_____X_____	_____	_____	_____
6.4	Was the applied force effective in minimizing danger to security force and non-hostile personnel?	_____X_____	_____	_____	_____
6.5	Did all personnel maintain fire control and fire discipline, using appropriate tactics, target acquisition and selective fire?	_____X_____	_____	_____	_____
6.6	Did conditions justifying the use of deadly force reasonably appear to exist before deadly force was applied?	_____	_____X_____	_____	_____

Standard:

Overall, did the application of force contribute to or detract from the resolution of this contingency and was it applied in accordance with applicable law?	_____X_____	_____	_____	_____
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CLASSIFICATION WHEN COMPLETED

COMMENTS AND EVALUATION JUSTIFICATION

The use of deadly force was appropriate in this case, as the adversaries had penetrated a vital facility and were using deadly force themselves.
However, although the level of force (deadly) was appropriate, the manner in which that force was applied was sometimes excessive. At times the security force delivered a heavy volume of fire which was not always directed at a specific, identified target. At least one TRT member was disabled by friendly fire due to lack of positive target identification during the firefight. There was excessive firing around the facility, most of it unnecessary, and security force leaders did not appear to have control over who was firing. Had this occurred during full shift operations, many plant workers as well as guards would have been endangered.

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
7.	<u>Intelligence</u>				
7.1	Was immediately available intelligence exploited?	_____	<u> X </u>	_____	_____
7.2	Was intelligence immediately disseminated to the security force and to the CAS/SAS and supervisors?	_____	<u> X </u>	_____	_____
7.3	Was all available and appropriate intelligence passed to LLEA?	_____	_____	_____	<u> X </u>
7.4	Did the security force recognize important intelligence and take advantage of it? (e.g., adversary description, weapons, escape routes, etc.)	_____	_____	_____	<u> X </u>

Standard:

Did intelligence gathering and dissemination contribute to or detract from the overall resolution of this contingency?	_____	_____	_____	<u> X </u>
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COMMENTS AND EVALUATION JUSTIFICATION

This situation occurred too rapidly to permit demonstration of a real intelligence-gathering effort. Some basic information, such as number and location of adversaries, was sought, and available information was passed to appropriate people. Since there was no opportunity for real intelligence-gathering, this section is not applicable.

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
8. <u>Security Force Discipline</u>				
8.1 Were security force members responsive to supervisors?	_____	_____	_____X_____	_____
8.2 Were pre-exercise preparations conducted in a professional manner?	_____	_____	_____X_____	_____
8.3 Were exercise conduct and safety rules observed?	_____	_____X_____	_____	_____
8.4 Did security force members maintain a positive, confident attitude and professional conduct?	_____	_____	_____X_____	_____
Standard:				
Did security force discipline contribute to or detract from the overall resolution of this contingency?	_____	_____	_____X_____	_____

CLASSIFICATION WHEN COMPLETED

COMMENTS AND EVALUATION JUSTIFICATION

Confidence, morale and enthusiasm were high. Supervisors obviously had the respect and confidence of their people. I saw no evidence of anything but immediate response to orders. There was no hesitation or grumbling about "playing games," and all seemed eager to demonstrate their capabilities. All personnel complied with exercise rules. At the post-exercise critique, personnel maintained a professional manner and seemed concerned with learning from their mistakes rather than trying to fix blame for problems which were experienced. The self-evaluation which surfaced during the critique could have only occurred in a confident, disciplined organization.

CLASSIFICATION WHEN COMPLETED

	<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
9. <u>Response and Denial or Containment</u>				
9.1 Was response timely?	_____	_____X_____	_____	_____
9.2 Was denial or containment effective?	_____X_____	_____	_____	_____
9.3 Were there provisions for denial or containment in depth?	_____X_____	_____	_____	_____
9.4 Were all appropriate forces used?	_____	_____X_____	_____	_____
9.5 Was LLEA containment effective?	_____X_____	_____	_____	_____
9.6 If initial containment personnel were relieved by responders, was transfer of responsibility effective?	_____	_____	_____	_____X_____
9.7 If containment failed, was pursuit timely and effective?	_____	_____	_____X_____	_____
Standard:				
Did response and denial or containment contribute to or detract from the overall resolution of this contingency?	_____X_____	_____	_____	_____

CLASSIFICATION WHEN COMPLETED

COMMENTS AND EVALUATION JUSTIFICATION

Initial internal containment forces arrived as quickly as possible, but were spread too thinly. Adversaries were able to penetrate the containment and reach the outer fence. The TRT arrived as quickly as could be reasonably expected. However, since internal containment had been broken, they were able to prevent only a portion of the adversaries from leaving the protected area. Only through intelligent employment of the police helicopter, the skill and endurance of the TRT, and a little luck, were security forces able to locate, engage, and stop the remaining adversaries with the SSNM. Mission success was tenuous. (NOTE: When the main group of fleeing adversaries was neutralized, pursuit efforts stopped, even though there was no way of knowing if all the adversaries had been found or all of the SSNM recovered.)

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
10.	<u>Physical Security Systems and Geography</u>				
10.1	Do physical security systems complement the tactical capabilities of the security force?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>
10.2	Do sensor and alarm systems provide for sufficiently early detection of penetration to allow effective security force response?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
10.3	Do assessment systems provide sufficient information about adversaries to allow security forces to interdict adversary actions?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>
10.4	Are tactical communications equipment systems adequate?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
10.5	Are security force vehicles and weapons appropriate, capable, serviceable, and functional?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
10.6	Do barriers provide denial or sufficient delay to allow successful security force deployment?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>
10.7	Do response team-to-target distances provide time for security forces to interdict an adversary?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>

CLASSIFICATION WHEN COMPLETED

		<u>Needs Improvement</u>	<u>Adequate</u>	<u>Strong</u>	<u>Not Applicable</u>
10.8	Are alternate routes-to-target areas available?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>
10.9	Are any inadequate systems or equipment compensated for by the strength of other systems?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>

Standard:

Does overall physical plant and security equipment provide a credible opportunity for the security force to accomplish its mission?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>
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COMMENTS AND EVALUATION JUSTIFICATION

Alarm assessment systems are not sufficiently engineered to assist security force response. Consequently, responding personnel may not initially have the benefit of remote assessment. The delay provided by physical barriers is not sufficient to assure build up of forces for adequate containment. As demonstrated by this exercise, when adversaries begin their escape while containment is still "thin," they can easily escape. This is critical, as the distance the TRT may have to travel requires initial inner containment to delay the adversary until the TRT can arrive. If inner containment is broken prior to the arrival of the TRT, the mission of the TRT changes from containment to search and pursuit. This causes a problem of much greater magnitude with a seriously diminished chance of success. The size of the site and associated response times exceed the delay provided by physical facilities. The lack of delay was evident during this exercise and must be considered a factor in a real emergency situation.

CLASSIFICATION WHEN COMPLETED

Needs
Improvement Adequate Strong Not
Applicable

11. Other Considerations

Standard:

Did factors other than the previously listed considerations have a significant impact on the achievement of the overall security objective of this exercise? If so, explain and estimate impact.

_____ _____ _____ X

COMMENTS AND EVALUATION JUSTIFICATION

NONE OF SIGNIFICANCE NOTED

CLASSIFICATION WHEN COMPLETED

Needs Not
Improvement Adequate Strong Applicable

12. Overall Evaluation

Standard:

Did overall security performance indicate effectiveness in dealing with a contingency of this particular type?

_____ X _____ _____ _____

COMMENTS AND EVALUATION JUSTIFICATION

The security force demonstrated some solid skills and capabilities. However, significant weaknesses were evident. The most serious were deficiencies in communications and application of force, with some weaknesses detected in tactical techniques. Physical facilities do not provide sufficient delay to guarantee the TRT will have adequate time to react. Although the security system was able to accomplish its mission during this exercise, it did so by a very narrow margin.

Evaluator's Name and Signature

APPENDIX I

EXAMPLE CONTROLLER/EVALUATOR COMMENT SHEET

(Classification When Completed)

APPENDIX I

EXAMPLE CONTROLLER/EVALUATOR COMMENT SHEET

(In addition to completing evaluation sheets, Controllers and Evaluators should feel free to make any comments or observations that might clarify issues or have a bearing on exercise outcome.)

DATE _____

NAME _____

CONTROLLER/EVALUATOR POSITION _____

COMMENTS

(signature)

(Classification When Completed)



APPENDIX J

EXAMPLE PARTICIPANT CRITIQUE SHEET



(Classification When Completed)

APPENDIX J

EXAMPLE PARTICIPANT CRITIQUE SHEET

DATE: _____

POSITION: _____

SPECIFIC DUTIES (if applicable): _____

1. IMPRESSIONS OF EXERCISE (Realism, Problems with Exercise Constraints, Appropriateness of Evaluation)

(Classification When Completed)

(Classification When Completed)

2. PROBLEMS ENCOUNTERED AND RESOLUTIONS (As applicable to the role you were playing. Examples: radio failure, weapons malfunction, coordination problems, etc.)

3. SELF EVALUATION (How well do you think you and your organization functioned during this exercise? What went wrong? What went right? Please indicate an overall rating and explain.)

NEEDS IMPROVEMENT _____ ADEQUATE _____ STRONG _____

(Classification When Completed)

4. OTHER COMMENTS

(Participant's Name)

(Signature)



<p>NRC FORM 335 (2-84) NRCM 1102, 3201, 3202</p> <p style="text-align: center;">BIBLIOGRAPHIC DATA SHEET</p> <p>SEE INSTRUCTIONS ON THE REVERSE.</p>	<p style="text-align: center;">U.S. NUCLEAR REGULATORY COMMISSION</p> <p>1. REPORT NUMBER (Assigned by TIDC, add Vol. No., if any)</p> <p style="text-align: center;">NUREG/CR-5081 BMI-2162</p>								
<p>2. TITLE AND SUBTITLE</p> <p style="text-align: center;">Tactical Exercise Planning Handbook</p>	<p>3. LEAVE BLANK</p>								
<p>5. AUTHOR(S)</p> <p>W. D. Telfair, Dale A. Moul, John W. Klingelhofer, James J. Davis, William R. Leonard</p>	<p>4. DATE REPORT COMPLETED</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">MONTH</td> <td style="width: 50%; text-align: center;">YEAR</td> </tr> <tr> <td style="text-align: center;">November</td> <td style="text-align: center;">1988</td> </tr> </table> <p>6. DATE REPORT ISSUED</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">MONTH</td> <td style="width: 50%; text-align: center;">YEAR</td> </tr> <tr> <td style="text-align: center;">April</td> <td style="text-align: center;">1989</td> </tr> </table>	MONTH	YEAR	November	1988	MONTH	YEAR	April	1989
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<p>7. PERFORMING ORGANIZATION NAME AND MAILING ADDRESS (Include Zip Code)</p> <p>Battelle Columbus Division 505 King Avenue Columbus, Ohio 43201-2693</p>	<p>8. PROJECT/TASK/WORK UNIT NUMBER</p> <p style="text-align: center;">NMS-87-009</p> <p>9. FIN OR GRANT NUMBER</p> <p style="text-align: center;">D2055-7</p>								
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<p>12. SUPPLEMENTARY NOTES</p>									
<p>13. ABSTRACT (200 words or less)</p> <p>This Handbook provides guidance for the development, conduct, evaluation, and critique of security force tactical response exercises at Category I fuel facilities licensed by the U. S. Nuclear Regulatory Commission. Background information pertinent to the development of the Handbook and the intent of rule-making that revises 10 CFR Part 73 to require tactical response exercises is provided. Step-by-step instructions on exercise development, conduct, evaluation, and critique are furnished to assist licensees in meeting regulatory requirements. Needs and resource requirements estimates are addressed in terms of personnel, staff-hours, equipment, weapons, and ammunition. Appendices provide examples of all documents required to plan, conduct, critique, and evaluate the exercises.</p>									
<p>14. DOCUMENT ANALYSIS - a. KEYWORDS/DESCRIPTORS</p> <p style="text-align: center;">Category I Fuel Facilities Security System Performance Testing Security Forces Tactical Response Exercises Tactical Response Teams</p> <p>b. IDENTIFIERS/OPEN-ENDED TERMS</p>	<p>15. AVAILABILITY STATEMENT</p> <p style="text-align: center;">Unlimited</p> <p>16. SECURITY CLASSIFICATION</p> <p>(This page) Unclassified</p> <p>(This report) Unclassified</p> <p>17. NUMBER OF PAGES</p> <p>18. PRICE</p>								

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