



# COMPOSITE ADVERSARY TEAM PROGRAM MANUAL



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# COMPOSITE ADVERSARY TEAM PROGRAM MANUAL

Reviewed by: **Gallus J. Bader** Digitally signed by Gallus J. Bader  
Date: 2021.11.05  
07:21:12 -06'00' Date: 11/5/2021  
Gallus J. Bader  
Program Coordinator  
Composite Adversary Team

Approved by: **Anthony R. Taylor** Digitally signed by Anthony R. Taylor  
Date: 2021.11.05  
09:24:37 -04'00' Date: 11/5/2021  
Anthony R. Taylor  
Program Manager  
Composite Adversary Team  
Office of Safeguards Assessments

Approved by: **James W. Lund** Digitally signed by James W. Lund  
Date: 2021.11.04  
08:39:49 -04'00' Date: 11/04/2021  
James W. Lund  
Director  
Office of Safeguards and Security Assessments  
Office of Enterprise Assessments

## Preface

As part of the U.S. Department of Energy (DOE) Office of Enterprise Assessments (EA), the Office of Safeguards and Security Assessments is responsible for conducting assessment activities at DOE and National Nuclear Security Administration (NNSA) sites that possess high-value security interests, as mandated in DOE Order 227.1A, *Independent Oversight Program*. To support this mandate, a Composite Adversary Team (CAT) program was developed to support performance testing at DOE and NNSA sites. This program manual describes the CAT program and establishes roles and responsibilities for personnel implementing and overseeing the program.

EA anticipates making periodic revisions to this manual in response to changes in DOE program direction and guidance, insights gained from assessment activities, and feedback from customers and constituents. The CAT Coordinator will facilitate an annual review of this manual and send recommended changes to the Federal CAT Program Manager. As part of the revision process, users of this manual are invited to submit comments and recommendations to EA.

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**Acronyms**

ATV	All-Terrain Vehicle
CAT	Composite Adversary Team
CFR	Code of Federal Regulations
DOE	U.S. Department of Energy
EA	Office of Enterprise Assessments
EA-20	Office of Safeguards and Security Assessments
ESS	Engagement Simulation Systems
FA	Federal Agent
FOF	Force on Force
GFE	Government Furnished Equipment
LSPT	Limited-Scope Performance Test
MTA	Multi-Topic Assessment
NNSA	National Nuclear Security Administration
NTC	National Training Center
OIC	Officer in Charge
OPFOR	Opposing Force
OST	Office of Secure Transportation
PPE	Personal Protective Equipment
RA	Risk Assessment
RSO	Range Safety Officer
S&S	Safeguards and Security
SPO	Security Police Officer

## Definitions

*Engagement Simulation Systems* – Non-lethal engagement systems that permit players to simulate combat conditions and provide an accurate assessment of the effects of weapons fired during simulated hostile engagement. Several forms of engagement simulation systems are available (e.g., the Multiple Integrated Laser Engagement System, dye-marking cartridges, blank fire, or inert systems).

*Field Administrative Support Staff* – Personnel providing administrative and logistical support for the CAT program.

*Force-on-Force Exercise* – An exercise that uses protective force or other designated personnel in the role of an adversary force to simulate the actual engagement of protective forces.

*Limited-Scope Performance Test* – A performance test that evaluates specific skills, equipment, operations, or procedures. The events of the test may be interrupted to facilitate data collection and may be purposely directed by evaluators to achieve certain evaluation goals.

*National Training Center* – A DOE organization consisting of multiple training academies and programs that support the development and implementation of centralized standardized training, curriculum development, and other training-related services. The National Training Center provides the infrastructure in support of these academies and programs.

*Officer in Charge* – Individual responsible for organizing, conducting, and supervising training activities and range operations.

*Performance Test* – A test to evaluate the ability of an implemented and operating system element or total system to meet an established requirement.

*Performance Test Director and Coordinator* – Individuals responsible for all aspects of planning, conducting, and controlling performance tests during assessments. They are also responsible for coordinating and communicating activities and information with the CAT and appropriate site personnel.

*Range Safety Officer* – Individual responsible for ensuring safety during the organizing, conducting, and supervising of training activities and range operations.

*Support Cadre* – Personnel who augment the CAT program and provide support as directed by the CAT Program Manager or CAT Coordinator. The support cadre includes protective force role players, instructors, and controllers.

## Section 1: Program Management

### General Information

As part of the U.S. Department of Energy (DOE) Office of Enterprise Assessments (EA), the Office of Safeguards and Security Assessments (EA-20) provides feedback to internal and external stakeholders through independently evaluating the effectiveness of safeguards and security (S&S) policies and programs throughout DOE and the National Nuclear Security Administration (NNSA). In support of this mission, EA-20 plans and conducts a variety of assessment activities that include performance testing, which incorporates a broad range of threats and scenarios to provide a complete and realistic evaluation of a site's S&S system readiness to protect DOE assets. Performance testing often includes limited-scope performance tests (LSPTs) and force-on-force (FOF) testing using the Composite Adversary Team (CAT) as role players and armed adversaries. This CAT program manual establishes the management, operations, and use of the CAT in support of EA assessments and other sanctioned activities and serves to promote consistency, ensure thoroughness, and enhance the quality of the CAT program.

The CAT program objective is to provide an adversary team that is trained and skilled in the tactics and techniques necessary to support a realistic assessment of a site's performance during testing to determine, with reasonable certainty, whether the S&S protection elements adequately meet the appropriate standards established by DOE policy and provide appropriate protection for DOE security interests.

The CAT program benefits EA, the individual CAT members, and participating sites and organizations. The CAT provides EA with a credible adversary force supporting the conduct of performance testing under as realistic conditions as possible. Individual CAT members benefit personally and professionally from the rigorous and specialized training. They also benefit from the exchange of ideas and techniques between members from various sites, and from the experience gained in planning and executing attacks against various DOE protective forces. Participating sites and organizations benefit from the knowledge and experience that their CAT members gain, including information about current test techniques and areas of emphasis and advanced tactical training methods, skills, and techniques, all of which can be used to improve the performance of a site's protective force.

The CAT consists of 25 to 35 DOE qualified security police officers (SPOs) and Office of Secure Transportation (OST) Federal agents (FAs) from field organizations and a small group of dedicated full-time EA staff referred to as the Core CATs. The following is a summary description of the primary roles and responsibilities for the positions directly associated with the CAT program:

*CAT Program Manager* – Position held by an EA Federal staff member responsible for the overall program. Duties include ensuring that all administrative, logistical, safety, and funding requirements pertaining to the CAT program are met, and that CAT members are properly trained, briefed, and prepared to safely provide the required support for EA performance testing. The CAT Program Manager is also accountable for overseeing and approving the CAT training curriculum and ensuring that this manual is up-to-date and, when changed, that it is presented to the EA-20 Director, or designee, for review and approval.

*CAT Coordinator* – Core CAT member responsible for the implementation and execution of the CAT program. This includes directing the Core CAT, Field CAT, and support personnel during CAT program activities; overseeing day-to-day CAT training and operations; ensuring that Field CAT members fully understand all details of their assigned performance test tasks; and taking positive measures to ensure that those tasks are properly executed.

*Core CAT* – Small group of dedicated, full-time employees tasked with executing day-to-day program operations, which include Field CAT selection and supervision during CAT program activities, maintaining CAT program policies and procedures, coordinating administrative and logistical support requirements, training curriculum materials, and staying abreast of the most current terrorist tactics, techniques, and information. Core CAT members serve as the adversary’s tactical team leaders during the execution phase of FOF performance tests.

*Engagement Simulation Systems (ESS) Support Program* – Program providing ESS equipment support during performance testing, CAT training, and other EA sanctioned activities. Support includes providing an operational inventory of the ESS versions of DOE-approved firearms, such as handguns and rifles; materials that replicate specialized adversary weapons and equipment, such as rocket-propelled grenades and vehicle-borne devices; support equipment, including controller/evaluator radios; and technicians/armors trained in the maintenance, set up, and issuance of all ESS equipment and weapons.

*Field CAT* – Group of DOE qualified SPO or OST FA representatives providing support to EA assessment activities by acting or portraying the part of an adversary during performance testing. Depending on their skill set and experience, senior Field CAT members may also serve as the adversary tactical team leaders during the execution phase of FOF performance tests.

*Safety Officer* – Individual responsible for ensuring the safe conduct of CAT training and for overseeing safety during performance testing activities.

*Support Personnel* – Personnel who augment the positions above and provide support as directed by the CAT Program Manager or CAT Coordinator. Support personnel include the support cadre, the EA performance test director and coordinator, and field administrative support staff. When fulfilling the role of support personnel, these individuals are responsible for reading and being familiar with this manual and the requirements for the assigned position.

## **Scheduling**

The CAT program depends on the cooperation and support of agent commands, the site protective force, and DOE field element management allowing individual Field CAT member participation. By providing Field CAT members with relief from their regular duties and continuing their salaries while they participate in CAT activities, management enables members to participate in EA appraisal and training activities and to take detailed lessons learned back to their home locations.

## **Training**

Scheduling of training is considered when developing the EA-20 annual assessment schedule. Typically, the schedule reflects the conduct of specialized training in the summer and annual training in the fall. Every effort must be made to capitalize on these limited training opportunities.

## **EA Performance Testing**

As part of the scheduling process for EA assessments, performance testing activities are scheduled throughout the year. The EA performance test director and coordinator will notify the CAT Coordinator of support needed for EA assessment performance testing. The CAT Coordinator selects potential participants based on the CAT members’ experience, special abilities, and past training opportunities. New members and members who have not recently supported performance testing activities receive priority.



## Uniforms and Equipment

EA provides necessary team and individual weapons and equipment, and funds travel expenses related to CAT assignments. Uniforms and government furnished equipment (GFE) are issued to Federal and contractor employees who are assigned responsibilities of Core CAT, Field CAT, support personnel (e.g., support cadre and administrative staff), and EA managers. (Reference Appendix 1, *CAT Uniform and Equipment Matrix Rev. 1*.) Uniform items are for exclusive use in support of EA mission activities; personal use is not authorized. The CAT Program Manager must approve variances to the matrix.

### Purchase

Uniform and equipment purchases should be accomplished on a two-year fiscal year planning cycle and as directed by EA. Based on the uniform and equipment matrix, the CAT Coordinator or designee conducts research and recommends uniforms and equipment required to support operational needs. Recommendations include the vendors, types, sizes, quantities, individual item cost, and justification. These recommendations are presented to the CAT Program Manager for concurrence before being submitted to the EA contracting officer's representative for approval.

### Issuance

Uniforms and equipment are issued by the CAT Coordinator or designee in accordance with the *CAT Uniform and Equipment Matrix Rev. 1*, except as directed by the CAT Program Manager. Core CAT and support personnel may be authorized to purchase specific equipment and obtain reimbursement in accordance with applicable acquisition procedures with concurrence by the CAT Program Manager. Field CAT uniforms and equipment are distributed during new CAT orientation. All CAT personnel sign for the items received and acknowledge usage and care requirements. (Reference Appendix 2, *CAT Uniform and Equipment Issue Form*.) The CAT Coordinator maintains a hardcopy of all signed forms until the equipment is returned. Based on the CAT Coordinator recommendation and CAT Program Manager approval, uniform and equipment items may be re-issued when they are no longer serviceable. Worn or damaged uniforms and equipment are replaced on an as-needed basis. Personnel who are issued uniforms and equipment are expected to care for and maintain the items in accordance with the manufacturer instructions and ensure that these items are available to support CAT program activities. Personnel supporting multiple roles, e.g., the support cadre, ESS support program personnel, and EA managers, receive a single issue of designated equipment required of the highest duty category.

### Inventory

The CAT Coordinator maintains an accountability/tracking system of all uniforms and GFE, ensuring equipment inventory is maintained at a level to effectively support operational needs. Upon staff departure, items that are personal, hygienic, or size-specific, i.e., uniform, hat, and boots, which are not considered returnable, may be retained by the terminating personnel, and will be removed from the inventory spreadsheet/database.

## ESS Support Program

The objective of the ESS support program is to support the performance testing of the Department's most critical protection systems. The program offers a range of services in support of performance testing during EA assessment activities, CAT training, and other EA sanctioned activities. Program activities include trip planning and preparation; ESS firearm modifications; transportation and secure storage of ESS firearms and blank ammunition; providing and maintaining communication equipment and licenses; inventory control; and administrative functions. See the ESS program manual for more information.

## Section 2: Team Composition

### General Information

The CAT consists of a group of full-time employees, referred to as the Core CAT, and a group of DOE SPO/FA personnel, referred to as the Field CAT. Both groups are comprised of highly skilled and professionally trained individuals. Core CAT members are full-time support contractors, and Field CAT members are selected from participating DOE field sites and the OST. A site's Field CAT nominee submission reflects the confidence that site management places on a nominee's ability to meet the demanding challenges of this assignment. It is imperative that the CAT recruitment processes be fair and efficient; allow participation by the maximum number of source organizations; and avoid undue burden on any single organization.

### Core CAT Selection

The selection of Core CAT personnel is based on criteria from the service support contract.

### Field CAT Selection

Selected from DOE participating organizations, Field CAT personnel are competent in job-related skills and familiar with the Department's threat policy and applicable adversary capabilities, tactics, weaponry, and equipment. Moreover, Field CAT members must be a qualified SPO or FA (i.e., they must meet physical fitness requirements and possess the requisite firearms qualifications and an active DOE Q clearance), and diverse experience is preferred (e.g., previous military service and civilian law enforcement).

The CAT Coordinator monitors the participation of individual Field CAT members and, when necessary, notifies the CAT Program Manager of needed positions on the team. The CAT Program Manager solicits nominations from the Field S&S directors (or equivalent) of the DOE organizations participating in the CAT program. (Reference Appendix 3, *CAT Member Nomination Request Letter (Example)*.) Ideally, three nominees are requested per position to be filled. Nomination requests include guidelines that specify the skills and qualifications required of nominees, as well as a request that certain pertinent data be provided for each nominee. (Reference Appendix 4, *Guidelines for Nominee Selection, Duties, and Desired Skills*, and Appendix 5, *CAT Nominee Data Sheet*.)

If a selection is necessary to fill a spot vacated by a Field CAT member rotating off the team, every effort is made to solicit nominees from the same site as the member being replaced unless the organization wishes to withdraw from the CAT program or suitable nominees are not available. If a selection cannot be made from the submitted nominees from that site, the requirements are reviewed with site management and additional names are solicited from that site and/or from other participating sites.

Upon receiving the nominations, the CAT Program Manager and CAT Coordinator, as available, or designees visit the site to conduct in-person interviews. However, in some instances, interviews may be conducted via telephone. The CAT Program Manager and CAT Coordinator or designees evaluate the nominees and select new members. The evaluation process focuses on the desired team composition and the nominees' qualifications. Field CAT members are expected to meet the following requirements and attributes:

- Display a high level of professionalism and maturity
- Be physically fit
- Be a currently qualified DOE SPO or FA proficient in the tactical, marksmanship, and other duty skills required by their site
- Display motivation and a positive attitude
- Be willing to work long hours under adverse conditions
- Be mission oriented.

The CAT Program Manager sends a formal notification letter of selection to new members and provides copies to the responsible DOE element and the CAT member's employer. The notification letter (see Appendix 7, *CAT Selection Notification Letter (Example)*) includes dates of upcoming CAT training and general guidance on member duties and conduct. Individuals must attend new CAT orientation and annual CAT training and must also support one FOF performance test during an EA assessment before being designated an official Field CAT member.

Field CAT members are encouraged to serve for a minimum of two years or at the discretion of the CAT Program Manager and CAT Coordinator. Generally, attrition and scheduled rotation of Field CAT members (e.g., transfers, promotions) will provide new candidates with the opportunity to become Field CAT members. Field CAT members from the same source organization should be rotated at different intervals to maintain an adequate experience base. The CAT Coordinator promptly notifies the CAT Program Manager to generate Field CAT replacement solicitation letters for the EA-20 Director's signature at least two months before each rotation date.

## Section 3: Team Utilization

### General Information

The CAT is primarily used to support large scale performance testing during EA assessments. However, the CAT is also available to support other EA sanctioned activities, as requested. While large scale performance test scenarios are primarily designed to test the protection of Category I/II quantities of special nuclear material, the CAT program can also be used to facilitate the testing of lesser threat scenarios and performance of security systems protecting Category III and IV quantities of special nuclear material, classified matter, critical infrastructure, government property, and personnel. Only a portion of the CAT is deployed for any assessment activity. When performing duties associated with EA activities, Field CAT members function under the supervision of the CAT Program Manager, CAT Coordinator, and Core CAT, with the Core CAT being directly responsible for the planning, assignment of individual responsibilities, and team conduct.

### Large Scale Performance Testing

To ensure the most efficient use of time and resources, a high level of coordination and planning before arriving on-site is required to support protective force performance testing. The CAT Coordinator works with the EA performance test director and coordinator to finalize testing topics, times, and locations based on the objectives and evaluation criteria. The CAT Coordinator and the EA performance test director and coordinator determine the necessary site support, including suitable staging and rehearsal areas, any necessary site safety risk assessments (RAs) (in conjunction with the Safety Officer), CAT work/storage spaces, practice areas, and weapons/munitions storage requirements (in conjunction with the ESS support program representative). The CAT Coordinator requests the appropriate equipment from the ESS support program representative. The EA performance test director and coordinator manages requests for any proposed needs with the site.

To provide the required skill mix while minimizing disruption to individual and source organization schedules, EA must identify Field CAT personnel requirements and availability for performance testing as soon as possible. The CAT Coordinator emails an initial request for support to all Field CAT members requesting their availability to support performance testing on the desired dates. (Reference Appendix 9, *Initial Request for CAT Support of EA Performance Testing (Example)*.) A courtesy copy is also sent to the CAT Program Manager and the EA Office of Resources, Communications and Analysis for travel and budget considerations.

Upon confirming identified needs and CAT availability, the CAT Coordinator, with the approval of the CAT Program Manager, selects the primary and alternate CAT members for that testing period. Considerations in the selection process include:

- Number of Field CAT members required
- Skills required (e.g., snipers, breachers, and all-terrain vehicle [ATV] operators)
- Inclusive dates of required participation
- Assessment location (Field CAT members from the assessed facility are ineligible)
- Availability of team members based on responses from the initial request for support
- Participation history (the goal is for each Field CAT member to participate in an equal number of assessments).

The CAT Coordinator sends an email formally requesting Field CAT support to each CAT member, the respective protective force managers, and the ODFSA or designee. (Reference Appendix 10, *CAT Member Request for Support (Example)*.) Memorandum courtesy copies are sent to the EA Office of Resources, Communications and Analysis representative to facilitate the initiation of funding transfers to the sites and to the field administrative support staff responsible for travel arrangements, access control, and training requirements for the EA assessment team.

The EA field administrative support staff addresses travel considerations, logistics, and site access control and training requirements as part of their overall responsibilities in supporting the EA assessment at that site. Responsibilities include DOE badging requirements, site-specific training, inclusion of the required number of hotel rooms in the assessment team block of rooms, and distribution of pertinent coordinating instructions. Lodging reservations for the CAT may extend three days beyond their expected release date to allow for unexpected delays in the testing schedule. Additionally, as requested by the CAT Program Manager, all Field CAT members and their managers receive DOE Form 5631.20, *Request for Visit or Access Approval*, with instructions to complete the personal information portion and send it to the designated point of contact at the site to be visited.

As part of the *CAT Member Request for Support* email, Field CAT members receive lodging information, car rental assignments, schedules, maps, and specific logistical information. Individuals supporting CAT activities are responsible for making their own travel and rental car arrangements and contacting the designated hotel to guarantee their rooms. Field CAT members must submit travel authorization per their site policies and procedures for authorization and reimbursement of travel expenses. The CAT Coordinator keeps CAT members abreast of any travel changes. Personnel must make every attempt to arrive at the assessment location to attend a team briefing at 1900 hours on the initial day of travel and complete site-specific training before arrival, unless directed otherwise. The CAT Coordinator verifies through the EA field administrative support staff that each DOE Form 5631.20 has been received and that all other access control and training requirements are complete.

While on-site, team members are expected to comply with security-related postings and placards that indicate the boundaries of security areas, as well as rules regarding prohibited articles. Team members are also expected to comply with all information security and cybersecurity policies regarding the use of classified and unclassified computers and the control and handling of documents containing classified or controlled unclassified information. When in doubt about regulation or policy, team members should consult the CAT Coordinator for clarification. If problems are encountered, or if local requirements alter essential test activities, the CAT Coordinator should inform the EA performance test director and coordinator as soon as possible.

As soon as team members arrive on-site, the planning effort continues with the development of detailed plans, safety walkdowns, and rehearsals. Planning at the team level includes windshield tours of the target site under day and night conditions, review of adversary operations orders, and insider interviews and intelligence collection. Insider interviews and intelligence collection take into consideration the scope of information that could be available to adversaries, as characterized by DOE threat guidance. Generally, open-source information is practically unlimited because of the capabilities of modern intelligence-gathering equipment and techniques. However, due to time and resource constraints, opportunities are limited for the CAT to gather the information needed for planning and conducting the mission. To facilitate the availability of this information in preparing for performance testing, information is divided into two categories: that which is available to the scenario development Trusted Agents, and that which is available to the CAT. To plan certain performance tests, the scenario development Trusted Agents must have access to all possible sources of information for a variety of targets on the site. However, this information is not shared with the CAT for use in developing detailed tactical plans against a specific target. The information available to the CAT is limited to that which can

be obtained from any available unclassified source, undetected observation, or an insider. In addition, to partially represent the intelligence information that would be available to a real adversary, CAT members are provided tours of areas that are open to the public or to which undetected access can be gained.

CAT members rehearse operations orders at a mock facility. If a similar facility is unavailable, the target area is simulated with chalk/tape/rope outlines. Terrain models may be used. Rehearsals include walkthroughs and full-dress rehearsals at half and full speeds. The detailed tactical plans are modified/refined as required. The Safety Officer conducts walkdowns in accordance with responsibilities described in Section 5, *Safety*. The CAT Coordinator and the EA performance test director and coordinator must establish an effective way to communicate, as well as alternative communication strategies.

At the conclusion of rehearsals and before the test is conducted, the CAT team leader responsible for each scenario provides a brief-back, which has been scheduled by the EA performance test director. Primary attendees should include the site exercise director, senior controller, test coordinator, and Federal oversight personnel; CAT participants and controllers; EA Safety Officer; and other personnel as directed by the EA performance test director and coordinator. The brief-back generally follows the five-paragraph order format and includes information regarding the situation, mission, execution, administration and logistics, command and signal, keys to success, and critical controller calls. The CAT team leader is provided an opportunity to verify critical controller calls, task times, and simulation events with the site senior controller, exercise director, and CAT controllers. Once the mission brief is completed, questions are solicited from the attendees to ensure that all involved have a common understanding of the CAT planned activities.

After performance testing is completed, the CAT provides a detailed debrief or hotwash of its actions to the EA performance test director and coordinator and other pertinent EA and site personnel/management. Primary attendees should include the site test director and senior controller, ESS support program representative, CAT participants, EA Safety Officer, and other personnel as directed by the EA performance test director and coordinator. The CAT team leader gives an operation overview, and each CAT participant subsequently presents their specific actions during the operations. Details of each member's actions/events should include location and status at the time of exercise termination, method of "kill" (harness or controller call), engagements on protective force personnel (including vehicles and fighting positions), and any ESS equipment-related issues.

The ESS support program representative and CAT Coordinator ensure that equipment and other support elements are available before testing begins. Equipment is not removed from the ESS workspace or vehicles without the knowledge and authorization of the responsible ESS support program representative. The accountability of all ESS equipment will be verified at the conclusion of testing activities and before the CAT is released.

### **Other EA Sanctioned Activities**

The CAT is used to support other EA sanctioned activities, such as training offered by the National Training Center (NTC), and performance testing conducted at other DOE sites or by other government agencies, as requested. Representatives from the NTC, DOE, or other government agencies submit requests for CAT assistance to the CAT program manager. The EA-20 Director approves these activities as resources and schedules allow.



## Section 4: Training

### General Information

Field CAT members joining the program are among the best trained and qualified that their home sites have to offer. However, the specific CAT mission demands require additional advanced training to prepare Field CAT members for their role simulating a terrorist or other adversary group. To this end, EA assembles the CAT semi-annually/annually for a week of intensive training under the instruction of experts in tactical operations, weapons, and equipment deployment. Training is designed to enhance CAT members' skills and abilities in the areas of firearms familiarization, prop usage, and individual and team tactics.

### New CAT Orientation

As part of the CAT training program, an orientation course is given to newly selected CAT personnel. The block of training is designed to provide initial training in preparation for and facilitating a smooth integration with the incumbent CAT members during CAT training and ultimately as participants in EA performance testing. Training goals are to familiarize the new personnel with their roles and responsibilities, as well as the equipment used during performance testing, and provide education on actions employed by adversary groups. Training specifics include an overview of the CAT program manual, weapons familiarization, and lessons on convoy ambush techniques and theory and practice of special operations. Additionally, personnel attend the ATV safety institute rider course. Newly selected personnel will also receive GFE at the initial orientation and training session.

### Methodology

The CAT training curriculum has been established using the DOE instructional system design process (see Appendix 8, *CAT Instructional Design Process and Methodology*) and maintains training approval program certification through the NTC. Curriculum components have been developed to provide instruction to CAT members on how to perform specific mission-essential adversary tasks under simulated combat environmental conditions. Core CAT members are DOE- and NTC-certified instructors and often augment and collaborate with the NTC, further enhancing their instructional skillset. Wherever possible, NTC or other DOE site lesson plans are used. Where no lesson plans exist for a particular subject, Core CAT members develop the necessary lesson plans and will follow the curriculum development process per NTC guidance. New or revised lesson plans will be coordinated through the CAT Coordinator and approved by the CAT Program Manager or designee. All lesson plans will be reviewed by the Core CAT and the EA-20 Safety Officer annually.

Annual training is designed to provide instruction on critical tasks in accordance with the CAT function analysis, and the CAT training needs analysis. Function analysis will be reviewed annually. Training need analysis will be updated on an annual basis. Typically, CAT members receive training in these areas:

- Zeroing weapons
- Adversary tactics
- Conducting rehearsals
- Performing movement to target by foot
- Performing movement to target by vehicle
- Breaching obstacles
- Performing distractions/diversions
- Providing security/support functions

- Performing ambushes
- Performing actions on the objective (radiological sabotage/theft)
- Performing exfiltration of team/objective
- Engaging protective force personnel
- Using night optical devices and thermal optical devices
- Loading, unloading, and clearing malfunctions with all weapons.

The goal of this training is to further enhance the capabilities and performance of the CAT in supporting EA's mission. CAT training focuses on instructing CAT members how to function as an adversary team. As such, CAT members are trained and skilled in the tactics and techniques necessary to support a realistic assessment of a site and can perform various security missions (e.g., theft, sabotage, active shooter, and protestors). A building block approach is used to allow the participants to initially focus on individual tasks and duties before combining skill sets in a team environment to participate in numerous FOF exercises. Training blocks are conducted as concurrent and/or overlapping training events that are designed to maximize available training time and instructors and to implement an aggressive training schedule. Each block of training begins as a lecture and/or group discussion between the instructor and CAT members. Where applicable, instructors will demonstrate the desired skill, technique, or tactic before the CAT members' participation or practice. CAT members participate in "hands-on" sessions and practice each skill, technique, or tactic to become proficient in each area.

EA assessment personnel and experts in the field of protective forces and adversary capabilities are requested to participate as part of the support cadre for the training course. These personnel fill the roles of protective force role players and augment instructors. In this capacity, the CAT could conduct individual and team tasks and to practice skills. Moreover, the CAT can employ those skills against an opposing force (OPFOR), providing a beneficial opportunity for hands-on learning.

On occasion, the CAT requires training from vendors and/or other government agencies based on the agency or vendor's curriculum and lesson materials. On completion of such courses, certificates of completion are copied and placed in the records of the individuals receiving the training. For example, ATVs are used extensively by the CAT in training and performance testing. The Core CAT has been trained and certified by the ATV Safety Institute as instructors who can provide ATV rider course training to Field CAT members and other support cadre personnel as required. The Core CAT uses the vendor-provided curriculum to certify trainees and retains individual records of completion/certification. The Safety Officer reviews and approves any physical activity associated with this training.

## Planning

### Site Selection

To ensure that the CAT can provide effective and quality support for testing at all DOE sites, training venues are selected from a broad range of locations and environments that are representative of DOE sites and that allow free-play activities. Training venues are selected based on research, recommendations, previous experiences, or visits. The schedule of upcoming locations and terrain for performance testing is also considered when making a selection. Potential sites are evaluated to ensure that they replicate or sufficiently emulate conditions typically found at DOE and NNSA sites to ensure that training realism is not adversely affected. The following two factors are important to ensuring the conduct of valid, useful training and must be considered during site selection:

- Safety – The safety of personnel and facilities is of the utmost importance. No training is vital enough to justify serious bodily injury or significant damage. However, there is always an



element of risk, just as there is an element of risk in everyday activities. The challenge in training is to find ways to conduct realistic, meaningful activities in the safest manner, without exposing participants to undue hazards. Consideration of the types of activities planned during training and selecting the location best suited for those activities minimizes the safety risks and number of controls necessary during the conduct of training.

- Realism – To elicit an accurate response, continuous efforts are made to ensure that training, tests, and test conditions are as realistic as possible, and to attempt to ensure that artificialities do not affect positive training experiences. Selecting a site that replicates the environment and conditions in which the CAT may be asked to perform is important to maintaining realism and minimizing the need for simulated or artificial actions.

When conducting research and selecting potential sites, the Core CAT evaluates each location using the following considerations:

- Availability (schedule)
  - CAT training is considered as part of the annual EA assessment schedule, and although changes do occur, flexibility for conducting semi-annual training is limited.
- Cost
  - CAT training involves a number of personnel and supplies. Selecting a location includes consideration of numerous budgetary parameters.
- Size (evaluating available facilities and areas to ensure that training objectives can be achieved)
  - Buildings capable of facilitating close-quarters combat
  - Open areas for conducting a variety of lane drills
  - Roads with various curves and straightaways to facilitate mobile combat and convoy testing
  - Structures for cleaning and maintaining ESS equipment
  - Areas for test firing and demonstrating ESS equipment and props
  - Areas out of the elements for participants to rest and eat between activities
  - Areas for the CAT to assemble, plan, and practice tasks.
- Accessibility (site owners will facilitate facility use)
  - Participants and possibly vendors/caterers should be able to access the location with minimal delay, reducing costs and getting the most benefit from the training time.
- Environment/Climate
  - The environmental conditions and climate of the location are necessary considerations to maximize the training experience. Inclement weather, such as excessive heat, cold, and rain, negatively affects the successful achievement of the training objectives. Costs may also increase to mitigate and control the conditions.

Once a potential training location has been identified, the CAT Coordinator forwards that information, along with potential dates for a planning visit to the site, to the CAT Program Manager for consideration. The planning visit is conducted to meet site management personnel/owners, gather site information, identify possible safety hazards, begin scenario planning, and identify local amenities (e.g., sufficient lodging, food

service). Typically, the planning visit is conducted by the CAT Program Manager, CAT Coordinator, Core CAT representative, Safety Officer, and representatives from the ESS support program and field administrative support staff. (Note: If a site has never been used for CAT training, the Core CAT will conduct a one-day site survey to evaluate site feasibility before conducting a planning trip.)

In addition to verifying and visually evaluating the criteria discussed above, the following topics/activities should also be considered during the planning visit:

- Site access and training requirements
- Firearm/ammunition storage requirements
- Site procedures and communication requirements for emergencies, weather conditions, etc.
- Radio frequency usage
- Physical conditioning (heat/cold stress), as well as the type of training with regard to time of year and expected weather conditions
- Reporting requirements for injuries, discovered safety hazards, wildlife, etc.
- Medical and emergency response availability, response times, and procedures
- Firefighting equipment and procedures
- Training objectives, as well as walkdowns of the proposed training areas by the Range Safety Officer (RSO) and site Officer in Charge (OIC)
- RSO and OIC certification classes (if required)
- Training area suitability (realism in conjunction with safety)
- General industry hazards, i.e., industrial, radiological, environmental (solid waste management units), and biological (flora and fauna).

After the planning visit, the CAT Coordinator submits a trip report to the CAT Program Manager with the proposed site, discussion of the information obtained, and recommendation for where to conduct the training. If requested by the site, the CAT Program Manager forwards a formal letter of intent to the appropriate site director, manager, or owner for use of the training site.

### **Training Plan**

The scope of the training/work to be performed is determined by the CAT Coordinator and other Core CAT personnel. The planned activities and training course are developed and documented in a training plan approved by the CAT Program Manager. The Training Plan includes goals, objectives, training methods, activities, schedule, documentation and evaluation, safety considerations, cleanup, and logistical requirements. Core CAT personnel are DOE-certified instructors and are aware of the health and safety requirements demanded by DOE. Consequently, in conjunction with the Safety Officer, Core CAT personnel plan activities and develop the Training Plan to ensure that activities or environments that are considered unacceptable hazards or dangers are immediately excluded. Identified hazards that cannot be eliminated are mitigated during the initial planning phase and addressed through engineering, substitution, or administrative controls.

Training goals and objectives must be relevant to the assigned mission of the tested personnel. The goals and objectives are based on the existing function analysis developed for the CAT program, and a subsequent training needs analysis is developed for the CAT members. Once the goals and objectives of

each activity are identified, they must be communicated effectively to ensure that they are clearly understood and that the training is subsequently conducted with the goals and objectives in mind.

### **Logistics and Final Coordination**

To verify the availability of support cadre personnel, the CAT Coordinator sends an email requesting support during the proposed training dates. Based on responses received, the CAT Coordinator, in conjunction with the Safety Officer, reviews the staff assignments to determine whether personnel participating in physically exertive aspects of the CAT training are assigned to positions/duties that are consistent with their most current medical release.

Final coordination with the site's points of contact for all aspects of training should be completed before training begins to confirm location details and address any potential last-minute issues. Training activities are conducted at all times of the day and night and often include 12–14-hour days. Enough food, drinking water, and break areas must be provided to participants. Additionally, lodging and transportation requirements are necessary to ensure that participants are available and rested for each day's activities. A logistics and safety briefing will be provided on the evening of the assigned travel day for the CAT and the support cadre.

### **Conduct**

The CAT Program Manager is ultimately responsible for overall training, the CAT Coordinator is responsible for conducting and executing the training, and the Safety Officer is responsible for maintaining a safe environment during the training. Training and safety oversight are conducted under the direction of DOE-certified instructors who are accountable to the CAT Coordinator. Training is performed in accordance with applicable DOE standards, and participants must comply with procedures and specific safety precautions associated with training activities.

CAT members participate in hands-on sessions that allow each participant to practice and become proficient in each skill, technique, and tactic. Participants then demonstrate their knowledge, skills, and abilities during individual, group, and FOF exercises. Senior CAT members are provided an opportunity to act as a team leader with support from another CAT as an assistant team leader.

Each team leader conducts a mission briefing before the mini-FOF exercises and their team's final FOF training exercise. The purpose of the briefing is to train and prepare the CAT members to conduct scenario brief-backs during multi-topic assessment (MTA) FOF tests. In support of the approach to building block training, the briefings for the mini-FOF exercises are short and presented to the Core CAT and instructors. The format includes (1) mission execution and (2) team performance. After each briefing, the Core CAT members provide feedback on the information that was provided and the speaker's presentation skills. For final FOF CAT training exercises, the team leader and/or assistant team leader will provide a formal brief-back that follows the CAT briefing matrix used during EA MTA FOF tests. The brief-back includes information on the situation, the mission, execution, administration and logistics, command and signal, the keys to success, and critical controller calls. The intent of the briefing is to replicate the mission and execution briefings that are provided to site management, EA-20 management, and observers that may be in attendance during the MTA FOF testing process. After the briefing, as part of the mentoring/mission approval process, senior advisory personnel will ask the team leader questions regarding mission planning, rehearsals, and contingency plans.

If an individual is deficient in an area of training, instructors will immediately make spot corrections. Corrections that require additional time are accomplished at the end of the training day by qualified instructors. Training time during CAT training courses is limited, so remediation may be limited. If an individual is unable to

perform a task with ease, that fact will be documented in the after-action report. That individual will not be selected to perform that task during subsequent performance testing activities and will be given another role in the opposition force plan until such time as he/she can demonstrate proficiency in the task. If a failure occurs, a qualified instructor will conduct immediate remediation and the student will be given another opportunity. If the student fails a second time, the CAT Program Manager, CAT Coordinator, and Core CAT make a formal decision on whether to attempt further remediation or remove the individual from the CAT program.

The professionalism and conduct of participants during EA activities, including annual training, is paramount to maintaining the organization's reputation and fostering beneficial relationships with external agencies. These relationships are formed and strengthened in part by respecting the facilities, equipment, and areas being provided during training activities. When training is completed, participants police the training areas for blank and expended ammunition, trash, and equipment, adopting a philosophy of leaving each area cleaner than it was when the team arrived. Before departing, participants will stand by for an "all clear" from the facility's manager as communicated by the CAT Coordinator. Additionally, at the end of the training/assessment, team members will be reminded to conduct a self-search of equipment bags/tactical vests for any GFE and/or training devices, including blank ammunition, smoke grenades, rocket signature simulator sleeves, rubber grenade simulators, and fuses, to ensure that no unauthorized munitions are inadvertently carried to the airport. A willful violation may result in removal from the CAT program.

Equipment from the ESS support program workspace or vehicles will not be removed from the training area without the knowledge and authorization of the responsible ESS representative. All ESS equipment will be accounted for before CAT and support cadre members are released.

### **Supplemental Training**

When possible, supplemental training may be offered to CATs, the support cadre, and instructors based on mission needs and as approved by the CAT Program Manager and appropriate EA management. Supplemental training should be used to enhance the performance of assigned tasks.

### **Feedback and Improvement**

At the completion of the training course, feedback is requested from the CAT members, instructors, Safety Officers, and a select group of support cadre participants regarding the effectiveness, suitability, quality, and safety of the training. After-action reports will be written by the Core CAT, Safety Officer, and medic, specifying whether the controls, as implemented, were adequate, and/or suggesting methods of improvement. The CAT Coordinator compiles the pertinent information gathered during hotwashes and after-action reports. This information is consolidated into a final report and submitted to the CAT Program Manager, coordinated through the EA-20 Director, and used in continuous improvement of the program and by the Core CAT as part of a training needs analysis for future training sessions.

### **Training Records Management**

The CAT Coordinator maintains CAT training session rosters, including specific equipment training. The rosters identify the training location, dates, instructors, and attendees. Associated tests and LSPT documentation are filed with the rosters. LSPT performance records are only maintained if a failure has been documented. The course documentation for each training session is kept on file with the CAT Coordinator and labeled with the month, and year the training occurred.

## Section 5: Safety

### General Information

A fundamental principle of the CAT program is that all participants, regardless of the activity, conduct themselves with the utmost respect for their safety as well as for others. Per DOE Order 440.1B, *Worker Protection Program for DOE (Including the National Nuclear Security Administration) Federal Employees*, and 10 Code of Federal Regulations (CFR) 851, *Worker Safety and Health*, employers are required to evaluate the working environment for potential hazards and eliminate or mitigate them to a reasonable level. While EA conducts assessment performance testing and other EA sanctioned activities, personnel adhere to the rules, regulations, and procedures of the site/organization being supported. Each CAT member participating in the activities must receive mission-specific safety briefs based on the site's/organization's safety and health program. If testing could result in personnel being put at high risk or if the site's safety assessments do not appear to be thorough or address the areas of concern, the CAT Coordinator notifies the EA performance test director of the concerns. Willful violation of safety rules, policies, or procedures during any CAT program activities may result in removal from the CAT program.

EA conducts training to provide realistic testing/training for the Field CAT while maintaining a rigorous level of safety and concern for the environment. To ensure the safe conduct of CAT training, this section describes the safety expectations associated with planning and conducting the training. All CAT members and support cadre participants must attend ESS, FOF and daily safety briefs before participating in training operations. These safety briefs may include such topics as site- or area-specific safety requirements, personal protective equipment (PPE), firearms safety, and vehicle safety.

### Participant Physical Requirements

The CAT training process and performance testing activities include the use of a support cadre comprised of individuals role-playing as protective force members, controllers, augment instructors, and evaluators. Occasionally, these activities require physical exertion exceeding that which is experienced during normal workday activities. EA requires all support cadre personnel and evaluators to have an annual medical examination before participation. The two types of examinations are fixed response and mobile response. An individual who is cleared as a mobile response role player may also participate in moderate response positions.

The fixed response examination is sufficient for support cadre personnel performing actions associated with a static defensive position or from a mobile security patrol vehicle under both day and lowlight conditions. Anticipated significant physical activities include operating semi-automatic and fully automatic blank-fire weapons from a stationary position; rapid motor functions, such as reloading firearms in a simulated combat environment; wearing and/or carrying approximately 15 pounds of tactical weapons and equipment; and quickly maneuvering distances less than 25 yards, with assigned equipment. Sustained activity at these levels will typically range from approximately 15 to 20 minutes.

A mobile response examination is required for support cadre personnel performing actions associated with the Field CAT or with a foot patrol or mobile security patrol vehicle under both day and lowlight conditions. Anticipated significant physical activities include intense simulated gun battles, wearing and carrying approximately 35 pounds of tactical weapons and equipment, and quickly maneuvering distances of approximately half a mile. Sustained activity at these levels will typically range from approximately 15 to 20 minutes.



All personnel participating in CAT training are required to have a medical examination and completed medical release form. (Reference Appendix 11, *CAT Medical Release Form*.) For example, criteria provided to assist the participant's personal physician in understanding the type and extent of anticipated physical activity includes running short distances, crawling, and climbing ladders/stairs, and may be performed in adverse environmental conditions (i.e., high/low ambient air temperatures, high/low levels of humidity, and in locations with altitudes up to 7,000 feet).

Medical release forms for new participants are immediately submitted to the CAT Program Manager and, for recurring participants, no later than 13 months from the previous submittal date. The CAT Program Manager forwards completed medical release forms to the CAT Coordinator, who maintains the signed forms for a period of at least two years and maintains a current medical release status roster (see Appendix 13, *CAT Medical Release Status Roster*) indicating the participant's name, medical release classification, and date of last medical exam.

Field CAT personnel are active SPOs and FAs selected from OST and DOE sites. These individuals are currently enrolled in fitness and medical programs in accordance with 10 CFR 1046, *Medical, Physical Readiness, Training, and Access Authorization Standards for Protective Force Personnel*, and, therefore, do not require additional medical examinations to participate in CAT training. Additionally, uniformed professionals from the military, or other non-DOE facilities, who may periodically be invited to participate as part of the support cadre or Field CAT during training are typically enrolled in an approved safety and health program and are allowed to participate after signing a medical release form (see Appendix 12, *Visiting Participant Medical Release Form*) and submitting it to the CAT Coordinator.

## General Requirements

Hazards and control measures associated with CAT training and CAT-specific equipment are documented in an RA developed and maintained by the Safety Officer. Past accidents, occupational injury experience, procedure review, should be used to determine the consequence and probability associated with the planned training activities. Lessons learned from previous training activities should significantly influence this process. RAs are developed using the five core functions of the integrated safety management system and identify and specify controls for hazards relevant to the training being conducted. Controls are identified using the typical hierarchical approach of substitution, engineering, administration, and PPE. Substitution with less hazardous products or activities is always the first consideration (e.g., using a "safer" distraction device). If a substitution is not possible, engineering controls, such as barriers, are then considered (e.g., deploying distraction devices or smoke grenades into a secondary containment device). If neither substitution nor engineering controls are practical, an administrative approach, such as limiting time of exposure (e.g., limiting time at an unprotected elevated edge, training, following procedures, and using safety controllers to monitor activities and conditions) will be used. PPE is used as a last resort. Field CAT personnel are highly trained and qualified DOE SPOs and FAs, and instructors are DOE- and NTC-certified; therefore, RAs can recognize "the skill of the worker" as a risk modifier. Additionally, weapons used in training are ESS-dedicated weapons with engineering controls that prevent the introduction of live ammunition.

Personnel must assume responsibility for protecting themselves from hazards that are present during activities. Potential exposures to hazardous materials and chemicals shall be maintained as low as reasonably achievable. Postings and safety signs must be followed. Any questions should be immediately addressed to the CAT Coordinator, Core CAT, or an instructor. Personnel must be able to recognize potential hazards and know how to limit or avoid exposure. Personnel should never enter an area unless they know and understand all the hazards and how to protect themselves. Personnel must report unsafe acts, conditions, or practices. When possible, reporting should follow the normal

chain-of-command lines. All personnel, regardless of the nature of their involvement with the training, have the authority and responsibility to stop any activity if, in their opinion:

- Unsafe conditions develop.
- They observe any unsafe condition or practice that would directly impact their safety or the safety of others.
- They observe any unsafe condition or practice that would directly result in a significant adverse impact on the environment.

(Note: Per 10 CFR 851, personnel have the right to remain anonymous when reporting workplace hazards, without reprisal. This can be done by contacting the DOE Office of Inspector General hotline at 1-800-541-1625.)

In addition to the controls and measures developed to address site- or venue-specific locations and environments, the baseline safety controls (see Appendix 14, *Baseline Safety Controls*) must be disseminated and understood by all participants before commencing CAT program activities.

### **Emergencies and Accident/Injury Reporting**

This section applies to emergencies and accidents/injuries that may occur during training activities and while supporting performance testing, including official government travel, and/or in conjunction with EA work-related activities at the Albuquerque ESS Facility. A copy of this manual will be readily available at the Albuquerque ESS Facility and during all training iterations. All emergencies and accidents/injuries must be reported immediately and include slips, trips, or falls; back, shoulder, neck, or other muscle strains; exposure to chemical fumes or radiation; cuts, broken bones, or bruises; motor vehicle accidents; food poisoning; occupational illnesses, including infectious diseases, if exposed while at work or on official travel; and hospitalizations for a work-related accident, injury, or illness. Personnel who are present during an emergency or injury should provide the appropriate level of medical treatment as necessary – i.e., first aid, transport to the nearest medical facility, or notifying 911 or the appropriate emergency contact at the location. Accidents should be reported even if they do not result in an injury.

Emergencies and accidents/injuries must be reported immediately to the CAT Coordinator or Safety Officer. The CAT Coordinator or Safety Officer will notify the CAT Program Manager, who will notify the EA-20 Director, the support service contract task manager, and (where appropriate and as approved by the EA-20 Director) the sponsoring organization of the individual's injury/illness/accident.

All emergencies and accidents/injuries must be investigated by the CAT Program Manager and CAT Coordinator with assistance from the Safety Officer. The injured employee, with assistance from the CAT Coordinator and/or Safety Officer, completes the necessary paperwork, including DOE Form 5484.3, *Individual Accident/Incident Report*. The CAT Coordinator and Safety Officer must maintain the availability of blank forms. If the employee is unable to complete the necessary paperwork, they may designate an individual to act on their behalf. The CAT Coordinator or Safety Officer completes Sections 38, 39, and 41, in accordance with DOE Order 440.1B, and based on this information, determines whether the injury resulted from a work-related activity and whether other factors contributed to the cause. (Note: Once a form is completed, it becomes Official Use Only. All necessary precautions shall be taken to protect the personally identifiable information provided on the form.)

Once complete, all forms are forwarded to the CAT Program Manager for review and submission. The Program Manager may choose to provide courtesy copies of the forms to the home organization of DOE contractor personnel for purposes of workers' compensation. The CAT Program Manager will work with

appropriate DOE personnel to determine whether additional reporting is required. If so, appropriate reports will be disseminated through appropriate reporting channels, such as the Occurrence Reporting Processing System, the Computerized Accident/Incident Reporting System, and lessons learned.

After the investigation, the CAT Coordinator and Safety Officer must identify and implement corrective actions, or compensatory corrective actions, as necessary to prevent a recurrence of the injury or illness.

## Training

The Safety Officer is responsible for developing RAs for specific activities supporting the CAT training course. Additionally, the Core CAT and instructors rely on their experience and training in identifying and analyzing hazards. The Safety Officer, Core CAT, and instructors conduct walkdowns of the rehearsal area and the actual training area. Specific hazards of training are also identified and analyzed by reviewing the Training Plan. The Safety Officer will also coordinate with the CAT Coordinator and provide safety oversight for rehearsals and prop development/modification, as well as safety briefings and oversight during the actual training exercises. All personnel associated with the training perform a walkdown of the area upon arriving at the training site. The Core CAT and instructors perform a walkdown of the training area each morning to verify that nothing has changed.

The Safety Officer is consulted during research on potential locations for training and participates in the planning visit to the potential training site. Multiple walkdowns of the area are performed by the Core CAT and Safety Officer during the planning visit. The primary safety considerations include:

- Understanding the physical aspects of the site in relation to how the planned training/activities will be conducted
- Discussions of specific site requirements with the RSO and/or OIC
- Communication requirements for emergencies, weather conditions, etc.
- Training area suitability (with regard to realism in conjunction with safety)
- Physical conditioning (heat/cold stress), as well as the type of training with regard to time of year and expected weather conditions
- Site reporting requirements for injuries, discovered safety hazards, wildlife, etc.
- Site medical and emergency response availability, response times, and procedures
- Site firefighting equipment and procedures
- General hazards, i.e., industrial, radiological, environmental (solid waste management units), and biological (flora/fauna).

As a result of the initial visit and walkdowns of the area, if necessary, the Safety Officer modifies the existing RAs or creates a new RA if the topic is unique. Using the same information, the Safety Officer develops a location-specific safety brief to be given to all personnel attending the training. Information that is not unique to the location or activity may be included in a “general” safety brief that is provided via email to all personnel associated with the training before they arrive at the training site. Personnel receiving this information should review it and have a good understanding of the content. The Safety Officer also assembles and provides the CAT Coordinator with any safety-related information requested or required by the host location.



When assigning individual duties for training activities, the Safety Officer and CAT Coordinator review the current status of medical release forms to determine whether personnel are assigned to positions/duties that are consistent with their respective medical release classification as indicated on the form. (Note: The CAT Coordinator and Safety Officer have the authority to prohibit any individual from participating if there is no evidence of a signed medical release form.)

An automated external defibrillator and multiple first aid kits must be present during semi-annual training. Before each session, the first aid kits must be checked against an established list (see Appendix 15, *CAT First Aid Kit Inventory List*) of necessary items, and missing items must be replaced before training begins. When multiple training activities are conducted simultaneously, a first aid kit will be available at each location.

Visitors/observers must check in with the CAT Coordinator upon arrival at the training location and must also be briefed on the general safety requirements, such as eye and ear protection, and remain with and/or follow the directions from the CAT Coordinator or designee.

### **Performance Testing**

The Safety Officer will conduct walkdowns of the rehearsal area as well as the actual testing area and determine whether site safety RAs adequately identify the potential hazards and mitigating controls. If necessary, addendums to the existing RAs may be developed. The Safety Officer will also coordinate with the CAT Coordinator and provide safety oversight for rehearsals and prop development/modification, and oversight during the actual exercises. In conjunction with the EA performance test director and coordinator, CAT Program representatives perform a walkdown of the areas upon arriving at the site and each day before commencing activities to verify that nothing has changed. As communicated during site safety briefings, each participant is responsible for safely conducting activities and following site-specific rules and regulations. Visitors/observers must check in with the CAT OPFOR lead controller upon arrival and remain with and/or follow the direction of the CAT OPFOR lead controller or designee. The Safety Officer will contact the inspection Team Chief or Federal lead prior to execution of activities to discuss safety concerns and considerations. The intent is to provide management with awareness of safety considerations specific to performance testing activities.

### **Other EA Sanctioned Activities**

The CAT Coordinator and Safety Officer will ensure that activities involving CAT program representatives are conducted in accordance with the general safety requirements described in this manual. Each participant is responsible for the safe conduct of activities and following site- and location-specific rules and regulations.

## Section 6: Awards

### Colonel Sydnor Memorial Award

The Colonel Sydnor Memorial Award recognizes Field CAT members who demonstrate exemplary performance while participating as part of the team. Colonel Elliott P. (Bud) Sydnor was instrumental in establishing the CAT program. His lifetime accomplishments and legacy remain an inspiration to the program; accordingly, the award is bestowed in his memory.

#### Award Considerations

For award consideration, Field CAT members must meet all of the following CAT membership requirements and attributes:

- Be physically fit
- Display motivation and a positive attitude
- Demonstrate a willingness to work long hours under adverse conditions
- Be mission-oriented
- Be a team player
- Demonstrate and maintain exemplary performance as a CAT member
- Complete a probationary period by participating in at least one training session and supporting one FOF performance test during an EA assessment.

Nominations for the Colonel Sydnor Memorial Award are based on individual Field CAT members who demonstrate exemplary leadership abilities, including:

- Character
- Ability to motivate others
- Aggressiveness in mission completion
- Willingness to assume responsibility
- Tactical skills
- Rapport with fellow members.

#### Nominations and Selection

During CAT training, the CAT Program Manager, CAT Coordinator, Core CAT, support cadre, or EA management may nominate a Field CAT member for the Colonel Sydnor Memorial Award. Nominations are detailed in writing, citing specific actions prompting the nomination, and submitted to the CAT Program Manager.

At the end of the last training session of the year, a panel consisting of the CAT Coordinator, Core CAT, selected support cadre personnel, and chaired by the CAT Program Manager, convenes to discuss award nominations and to determine whether nominees are eligible for and deserve the Colonel Sydnor Memorial Award in that calendar year. Although there is no specific requirement for the award to be presented each year, there will be no more than one awardee per year. The recipient is announced at the end of the last CAT training session for the year and, if possible, presented with the award at his or her home site.

## **Other Recognition Awards**

Various forms of recognition are presented to individual support personnel and/or organizations for their contribution to CAT program activities. These awards include challenge coins, plaques, and flags. All recognition awards are presented at the discretion of the CAT Program Manager.

**Section 7: Appendices**

Appendix 1 CAT Uniform and Equipment Matrix Rev. 1..... Appendix 1-1

Appendix 2 CAT Uniform and Government Issued Property  
 CAT Uniform and Equipment Issue Form  
 Support Cadre Uniform and Government Issued Property  
 Support Cadre Uniform and Equipment Issue Form..... Appendix 2-1

Appendix 3 CAT Member Nomination Request Letter (Example)..... Appendix 3-1

Appendix 4 CAT Nominee Selection Guidelines, Duties, and Desired Skills..... Appendix 4-1

Appendix 5 CAT Nominee Data Sheet ..... Appendix 5-1

Appendix 6 CAT Candidate Questionnaire..... Appendix 6-1

Appendix 7 CAT Selection Notification Letter (Example)  
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Appendix 8 CAT Instructional Design Process and Methodology  
 CAT Function Analysis Training Criteria/Task Validation  
 CAT Lesson Plan Format ..... Appendix 8-1

Appendix 9 Initial Request for CAT Support of EA Performance Testing (Example)... Appendix 9-1

Appendix 10 CAT Member Request for Support (Example) ..... Appendix 10-1

Appendix 11 CAT Medical Release Form  
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Appendix 12 CAT Visiting Participant Medical Release Form..... Appendix 12-1

Appendix 13 CAT Medical Release Status Roster..... Appendix 13-1

Appendix 14 Baseline Safety Controls ..... Appendix 14-1

Appendix 15 CAT First Aid Kit Inventory List..... Appendix 15-1

**Appendix 1: CAT Uniform and Equipment Matrix Rev. 1**

Category	Hat	Jacket	Short-Sleeved Shirt	Long-Sleeved Shirt	OD-Green Long Sleeve Shirt and Pants	OD-Green Defender Shirt and Hat	Tactical Uniform MultiCam	Utility Pants	Cold Weather/Rain Suit*	Shemagh	Tactical Boots	Knee and Elbow Pads	Team Wendy Helmet*	Boonie Cap	Equipment Bag	Safety Glasses/Goggles	Fire Retardant Gloves	Tactical Gloves	Multi/Utility Tool	Tactical Flashlight	Rhino Mount	COMTAC V Headset	3M Peltor COMTAC III
Support Cadre	1	1	1	1	2	1					1	1	1 <sup>1</sup>	1	1 <sup>1</sup>	1		1		1 <sup>1</sup>		1 <sup>1</sup>	
ESS Support Program Personnel	1	1	2	2				4	1							1			1	1 <sup>1</sup>			
EA Manager(s)	1	1	1	1							1					1				1 <sup>1</sup>			
Core CAT	1	1	2	2			2	4	1		1	1	1 <sup>1</sup>	1	1 <sup>1</sup>	1	1		1 <sup>1</sup>	1 <sup>1</sup>	1 <sup>1</sup>	1 <sup>1</sup>	1 <sup>1</sup>
Field CAT	1	1	1	1			2			1		1	1 <sup>1</sup>	1	1 <sup>1</sup>	1	1		1 <sup>1</sup>	1 <sup>1</sup>	1 <sup>1</sup>	1 <sup>1</sup>	1 <sup>1</sup>
Core Support Staff	1	1	2	2					1		1			1	1 <sup>1</sup>	1	1		1 <sup>1</sup>	1 <sup>1</sup>			

(<sup>1</sup>) Denotes items that are returned upon departure from the program.

Note: Personnel receive single issue of designated equipment (e.g, support cadre, ESS Support Program personnel, and EA managers are only issued uniforms/equipment required of the highest rating duty category). Equipment is issued upon initial assignment of duties and replaced on an “as needed” basis.

**Appendix 2: CAT Uniform and Government Issued Property  
CAT Uniform and Equipment Issue Form  
Support Cadre Uniform and Government Issued Property  
Support Cadre Uniform and Equipment Issue Form**



# Composite Adversary Team Program United States Department of Energy



## CAT Uniform and Government Issued Property

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The Office of Enterprise Assessments (EA) provides uniforms and government-furnished equipment (GFE) to Federal and contractor employees assigned responsibilities of Core Composite Adversary Team (CAT), Field CAT, support personnel (including support cadre and administrative staff members), and EA managers. The following list identifies the procedures and responsibilities for using uniforms/GFE issued to personnel. All personnel who are issued uniforms/GFE must sign and date this form to acknowledge receipt of specific items and agreement to the policy for its use.

Specific responsibilities include:

- Uniforms/GFE are used only for authorized EA duties as determined by the CAT Program Manager, CAT Coordinator, or EA management.
- GFE is only used by the individual who is issued the equipment unless otherwise authorized by the CAT Coordinator.
- Personnel are responsible for transporting all individual uniforms/GFE to all EA functions.
- If an individual's uniforms/GFE is lost during air travel, they must coordinate with the airline to replace lost items.
- Lost, stolen, or damaged uniforms/GFE must be immediately reported to the CAT Coordinator. If the incident occurred because of negligence, that individual must replace the items.
- Personnel must properly care for and maintain the uniforms/GFE issued to them. Uniforms/GFE that is improperly maintained will be replaced at the individual's expense.
- Uniforms/GFE that is expended, damaged, or destroyed during authorized EA duties or through normal wear will be replaced by EA at the discretion of the CAT Program Manager and CAT Coordinator.

Personnel must return GFE to the CAT Coordinator when terminating further participation in CAT duties and/or as directed by the CAT Program Manager and/or CAT Coordinator or designee. A signed receipt is provided after an inventory of GFE is completed. Items listed on the uniform and equipment matrix as personal, hygienic, or size-specific may be retained by CAT members being terminated.



# Composite Adversary Team Program United States Department of Energy



## CAT Uniform and Equipment Issue Form

CAT GFE issued items. Bring all items listed to CAT training and assessments.

Name:   
(Print Name)

Item	Quantity	Verify	Returned
Safety Glasses/Goggles	1	<input type="checkbox"/>	
Tactical Uniform Multicam	2 sets	<input type="checkbox"/>	
Nomex Gloves	1 pair	<input type="checkbox"/>	
Knee Pads	1 pair	<input type="checkbox"/>	
Elbow Pads	1 pair	<input type="checkbox"/>	
Polo Shirt	2	<input type="checkbox"/>	
CAT Hat	1	<input type="checkbox"/>	
Shemagh	1	<input type="checkbox"/>	
Boonie Hat	1	<input type="checkbox"/>	
*Equipment Bag	1	<input type="checkbox"/>	<input type="checkbox"/>
*Multi Tool	1	<input type="checkbox"/>	<input type="checkbox"/>
*Tactical Flashlight	1	<input type="checkbox"/>	<input type="checkbox"/>
*Team Wendy Helmet	1 # <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Rhino Mount	1 # <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
*3M Peltor COMTAC III	1 # <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
*COMTAC V Headset	1 # <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*Issued item **must** be returned

CAT Signature:  Date:

Return Date:

Verified by Core Cat Member:





# Composite Adversary Team Program United States Department of Energy



## Support Cadre Uniform and Government Issued Property

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The Office of Enterprise Assessments (EA) provides uniforms and government-furnished equipment (GFE) to Federal and contractor employees assigned responsibilities of Core Composite Adversary Team (CAT), Field CAT, support personnel (including support cadre and administrative staff members), and EA managers. The following list identifies the procedures and responsibilities for using uniforms/GFE issued to personnel. All personnel who are issued uniforms/GFE must sign and date this form to acknowledge receipt of specific items and agreement to the policy for its use.

Specific responsibilities include:

- Uniforms/GFE are used only for authorized EA duties as determined by the CAT Program Manager, CAT Coordinator, or EA management.
- GFE is only used by the individual who is issued the equipment unless otherwise authorized by the CAT Coordinator.
- Personnel are responsible for transporting all individual uniforms/GFE to all EA functions.
- If an individual's uniforms/GFE is lost during air travel, they must coordinate with the airline to replace lost items.
- Lost, stolen, or damaged uniforms/GFE must be immediately reported to the CAT Coordinator. If the incident occurred because of negligence, that individual must replace the items.
- Personnel must properly care for and maintain the uniforms/GFE issued to them. Uniforms/GFE that is improperly maintained will be replaced at the individual's expense.
- Uniforms/GFE that is expended, damaged, or destroyed during authorized EA duties or through normal wear will be replaced by EA at the discretion of the CAT Program Manager and CAT Coordinator.

Personnel must return GFE to the CAT Coordinator when terminating further participation in CAT duties and/or as directed by the CAT Program Manager and/or CAT Coordinator or designee. A signed receipt is provided after an inventory of GFE is completed. Items listed on the uniform and equipment matrix as personal, hygienic, or size-specific may be retained by CAT members being terminated.



# Composite Adversary Team Program United States Department of Energy



## Support Cadre Uniform and Equipment Issue Form

CAT GFE issued items. Bring all items listed to CAT training and assessments.

Name:   
(Print Name)

Item	Quantity	Verify	Returned
Safety Glasses/Goggles	1	<input type="checkbox"/>	
OD Green Tactical Uniform	2 sets	<input type="checkbox"/>	
Tactical Gloves	1 pair	<input type="checkbox"/>	
Knee Pads	1 pair	<input type="checkbox"/>	
Elbow Pads	1 pair	<input type="checkbox"/>	
Polo Shirt	2	<input type="checkbox"/>	
DOE Hat	1	<input type="checkbox"/>	
Shemagh	1	<input type="checkbox"/>	
Boonie Hat	1	<input type="checkbox"/>	
*Equipment Bag	1	<input type="checkbox"/>	<input type="checkbox"/>
*	1	<input type="checkbox"/>	<input type="checkbox"/>
*Tactical Flashlight	1	<input type="checkbox"/>	<input type="checkbox"/>
*Team Wendy Helmet	1 # <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
*	1 # <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
*	1 # <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
*COMTAC V Headset	1 # <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*Issued item **must** be returned

Support Cadre Signature:  Date:   
  
 Return Date:   
 Verified by Core Cat Member:

**Appendix 3: CAT Member Nomination Request Letter (Example)**

MEMORANDUM FOR [SITE SECURITY DIRECTOR]

FROM: [NAME]  
DIRECTOR  
OFFICE OF SAFEGUARDS AND SECURITY ASSESSMENTS  
OFFICE OF ENTERPRISE ASSESSMENTS

SUBJECT: Nomination Request for Composite Adversary Team Members

The Office of Enterprise Assessments (EA) periodically invites organizations throughout the Department of Energy (DOE) to include the National Nuclear Security Administration (NNSA) to submit nominations for the Composite Adversary Team (CAT). Specifically, we are seeking your support to fill CAT member positions with security police officer (SPO) [or Federal agent (FA)] qualified personnel from [SITE NAME]. The term of service as a CAT member will be a minimum of 2 years and require travel several times a year. A brief description of duties and time commitment is discussed below. While we recognize that your support for the program would require an investment of resources, we believe that the program provides substantial benefits to DOE/NNSA, your office, and the SPO [FA] who participates in the program. We would appreciate your support in filling [NUMBER] of our current vacancies.

Participation in the program is voluntary. This memorandum and attachments provide background information on the program and participation requirements. In determining interest, we encourage discussions on the benefits and expectations of this program with potential nominee SPOs [FAs]. The CAT program is essential to conducting credible oversight related force-on-force (FOF) performance tests. In the big picture, CAT members are an instrument to obtain a snapshot of the status of protection of national security assets at DOE sites. The CAT program also provides an effective mechanism for the interchange of tactical concepts and insights between key site personnel, provides participating sites/commands with a skilled cadre of adversaries for the support of their own FOF exercises, and provides each individual CAT member with an important opportunity for professional development. The attached *CAT Nominee Selection Guidelines, Duties, and Desired Skills* provide a brief explanation of typical CAT member duties, skills, and traits needed for participation.

EA requests that at least [NUMBER] SPOs [FAs] are nominated to fill a total of [NUMBER] positions. EA will make the final selection from your nominations. Once selected, CAT members will be expected to participate in a week-long initial orientation and training course. Thereafter, during their tenure, they may participate in up to five oversight activities and two adversary-oriented tactical training events per year. EA provides funding for all CAT-related travel costs while the home site continues to pay salaries.

For each nominee, please complete the attached *CAT Nominee Data Sheet* and include a full-length photograph. Return nominations by [DATE], to:

[NAME], CAT PROGRAM MANAGER, EA-20  
U.S. Department of Energy  
1000 Independence Ave, SW  
Washington, DC 20585-1290

Alternatively, the nomination sheets may be emailed to the CAT Program Manager at [EMAIL].

Your support in this matter is greatly appreciated. Should you have any questions regarding this request, please do not hesitate to contact me at [PHONE], or [NAME], CAT Program Manager, at [PHONE].

Attachments: CAT Nominee Selection Guidelines, Duties, and Desired Skills  
CAT Nominee Data Sheet

cc w/attachments:

[DIRECTOR], EA-1  
[DEPUTY DIRECTOR], EA-1  
[DIRECTOR], EA-20  
[CAT PROGRAM MANAGER], EA-20  
[DOE/NNSA PROGRAM LEAD]

**Appendix 4: CAT Nominee Selection Guidelines, Duties, and Desired Skills**



# Composite Adversary Team Program United States Department of Energy



## CAT Nominee Selection Guidelines, Duties, and Desired Skills

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Please consider the following guidelines covering general duties and desired skills when selecting nominees for the Composite Adversary Team (CAT). These general duties, skills, and personality traits apply to all members:

### General Duties:

- CAT members occupy sensitive and highly visible positions and are expected to maintain the highest standards of personal and professional conduct. While on travel status, each CAT member is considered an official representative of the U.S. Department of Energy (DOE) and his or her site. Accordingly, their behavior must always be beyond reproach.
- Participate as an adversary force member during limited-scope performance tests (LSPTs), ranging from free play to closely-scripted scenarios.
- May act as a role player in repetitive performance tests (e.g., executing many similar scenarios where the CAT member is apprehended, handcuffed, and searched).
- Participate in after-action briefings that are attended by the Office of Enterprise Assessments and site management and explain the rationale for actions taken during performance testing.

### Desired Skills:

- Qualified Security Police Officer (SPO) or Federal Agent (FA) (e.g., current physical fitness, firearms qualifications, and active DOE Q clearance).
- Well-grounded and competent in job-related skills, including familiarity with the Graded Security Protection policy and applicable adversary tactics, weaponry, and equipment.
- Possess as much diverse experience as possible (e.g., prior military service and civilian law enforcement).
- Able to formulate and execute tactical plans to assault a given target during force-on-force (FOF) performance tests and training.
- Knowledgeable in DOE firearms safety procedures and FOF exercise safety principles.
- Perform tactical maneuvers in various environments and conditions (e.g., built up industrial facilities, building interiors, low-light, and smoke-filled spaces).

### Time Commitment Required:

- Participate in up to five FOF exercises and two training courses per year.
- Approximately 40-60 hours per week during scheduled exercises or training sessions.

### Physical Demands:

- During FOF exercises, CAT members are typically required to run, jump, and climb while carrying a basic equipment load ranging from 25 to 75 pounds.
- Applicant should be in excellent physical condition.

**Appendix 5: CAT Nominee Data Sheet**



# Composite Adversary Team Program United States Department of Energy



## CAT Nominee Data Sheet

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FROM: \_\_\_\_\_

REFERENCE: CAT Member Nomination Request letter dated: \_\_\_\_\_

DATE: \_\_\_\_\_

SITE: \_\_\_\_\_

NOMINEE NAME (First, Middle, Last): \_\_\_\_\_

NOMINEE DOE EMAIL ADDRESS: \_\_\_\_\_

RANK (SPO, Sgt, Lt, FA): \_\_\_\_\_

COMBINED YEARS OF EXPERIENCE AS A DOE SPO/FA, etc.: \_\_\_\_\_

CURRENT POSITION/RESPONSIBILITIES:

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BRIEF EXPLANATION OF RANGE OF DUTY ASSIGNMENTS IN THE PAST FIVE YEARS:

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PREVIOUS MILITARY OR LAW ENFORCEMENT EXPERIENCE (military or civilian) AND LENGTH:

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# Composite Adversary Team Program United States Department of Energy



RELEVANT DOE TRAINING COMPLETED (Tactical Leadership, Breaching, PRFOT, etc.):

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OTHER RELEVANT TRAINING COMPLETED:

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---

---

OTHER INFORMATION FOR CONSIDERATION:

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MANAGER ADDRESS/TELEPHONE/EMAIL:

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PLEASE ATTACH A FULL-LENGTH PHOTOGRAPH:

## **Appendix 6: CAT Candidate Questionnaire**

Please see the CAT Program Manager or CAT Coordinator for interview questions.

## Appendix 7: CAT Selection Notification Letter (Example) CAT Member Expectations for Duties and Conduct

Mr./Ms. [NAME]

[ADDRESS]

Dear Mr./Ms. [NAME]:

***Congratulations!*** The U.S. Department of Energy (DOE) Office of Enterprise Assessments (EA) has selected you from several highly qualified security police officers (SPOs) and Federal Agents to be a member of the Composite Adversary Team (CAT). The [SITE OFFICE] nominated for this position.

As a CAT member, you will join other Federal Agents and SPOs from across the DOE, assisting in EA activities by acting as adversaries and role players in performance testing conducted to evaluate DOE protective forces. CAT members are not assessors and do not evaluate assessed facilities or personnel. CAT members perform duties that enable EA assessors to better evaluate the assessed facility. Attached is additional information on expectations for duties and conduct by CAT members. Your term of service as a CAT member will be a minimum of 2 years. During this period, you will participate in several assessments and CAT training courses. Your first activity as a CAT member will be to attend the orientation course on [DATE] in [LOCATION], followed by the CAT training course on [DATE] at [LOCATION]. During these courses, you and other new CAT members will receive an orientation to the CAT program and familiarization training on various weapons and equipment that will be used, train with existing CAT members, participate in a series of exercises and scenarios designed to assess your strongest skill areas, build teamwork, and become acquainted with role-playing techniques.

The EA CAT Coordinator will contact you, Mr. [NAME], who will provide specific details regarding the semi-annual training course and answer any initial questions you may have prior to arrival. During each assignment with EA, all CAT members work under the direct supervision of the CAT Coordinator and Core CAT members. More detailed information will be made available during the orientation course.

If you have immediate concerns or questions, feel free to contact Mr. [NAME], CAT Coordinator at [NUMBER], or me at [NUMBER]. Again, welcome aboard, and we look forward to a number of interesting, productive, and mutually beneficial activities during the coming years.

Sincerely,

[NAME]  
Composite Adversary Team Program Manager  
Office of Safeguards and Security Assessments  
Office of Enterprise Assessments

cc: [NAME, FIELD OFFICE SAFEGUARDS & SECURITY DIRECTOR]  
[NAME, SITE SAFEGUARDS & SECURITY DIRECTOR]  
[NAME, PROTECTIVE FORCE MANAGER]



# Composite Adversary Team Program United States Department of Energy



## CAT Member Expectations for Duties and Conduct

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Composite Adversary Team (CAT) members assist in the Department of Energy (DOE) Office of Enterprise Assessments (EA) activities by acting as adversaries and role players in performance testing conducted to evaluate DOE protective forces. While many CAT duties are interesting and even exciting, others are mundane and repetitive, and some can be physically demanding. Most CAT duties involve participating in performance testing protective force operations. Duties can include:

- Formulating a tactical plan to assault a facility/target and executing that plan as adversaries using engagement simulation systems equipment.
- Participating as adversaries in limited-scope performance tests and role-playing in repetitive performance tests (i.e., apprehension techniques, handcuffing, and search procedures).
- Performance testing routine access control procedures and various barriers and alarm sensor systems under controlled conditions.

Activities are conducted indoors and outdoors, in all weather conditions, and at various geographical locations. While care is taken to ensure safety, CAT members will, at times, be asked to endure some discomfort resulting from physical exertion and/or weather conditions.

### Composite Adversary Team Conduct

CAT members occupy sensitive and highly visible positions and are expected to maintain the highest standards of personal and professional conduct. This is especially important during the on-site EA assessments. Everything that members do can make an impression on the department, program office, field office, and site personnel. While on travel status, each CAT member is considered an official representative of EA, and their behavior must always be beyond reproach. CAT members must be tactful, courteous, and properly attired. They should conduct themselves in a manner that will enhance the professional stature of the assessment team and EA.

While on-site, members must comply with all local rules and regulations, entry and exit procedures, safety regulations, parking requirements, and other employee and visitor guidelines. CAT members must become familiar with all applicable information concerning local policies, and when in doubt, they should ask the CAT Coordinator or a Core CAT member. If problems are encountered during an assessment, members must immediately inform the CAT Coordinator or Core CAT.

**Appendix 8: CAT Instructional Design Process and Methodology  
CAT Function Analysis Training Criteria/Task Validation  
CAT Lesson Plan Format**



# Composite Adversary Team Program United States Department of Energy



## CAT Instructional Design Process and Methodology

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### A. ANALYSIS

- A Composite Adversary Team (CAT) functional analysis will be developed and maintained by the Core CAT. The U.S. Department of Energy (DOE) and National Nuclear Security Administration (NNSA) sites that provide personnel to serve as members of the CAT provide basic and advanced Security Police Officer training and Federal Agent training based on job analyses and job task analyses applicable to the site's specific mission requirements.
  - The functional analysis is focused on the requirements for the CAT members to prepare for and participate in EA-20 inspections, appraisals, assistance visits, and other sanctioned performance testing activities. The functional analysis begins with a review of pertinent documents and development of a preliminary set of duties, tasks, and sub-tasks applicable to the CAT's primary mission as an opposing force (OPFOR).
  - The Core CAT then conducts a "jury" validation of these duties and tasks, adding or deleting items from the initial list as required. The resulting document is a detailed task training criteria and validation.
  - A training criteria and validation survey will then be developed. The survey will require that subject matter experts collectively assign each task one of four color codes that best fits the task based on the following criteria:

#### **Black Criteria**

This task is common across most walks of life. Improper performance makes no difference in CAT operations or causes no personnel harm.

#### **Green Criteria**

There is low difficulty in performing the task. The task can be learned and competently performed with minimal guidance from coworkers, reading procedures, and/or following instructions for using equipment. Improper task performance would cause low to moderate consequences.

#### **Red Criteria**

Improper task performance may result in moderate to high consequences (injury or a real emergency). Related task performance (at the CAT's home site) maintains proficiency on this task. One-time training is sufficient to learn competent task performance.

#### **Blue Criteria**

Task requires frequent practice to maintain proficiency. Proper task performance is critical to safety (extreme consequences – serious injury, death, or site emergency). The task is performed so infrequently that one might forget how to perform the task. Task must be retrained to refresh perishable skills, knowledge, and abilities to remain highly proficient.

The color codes of the Training Criteria/Task Validation survey not only relate to the difficulty, frequency, and consequences of a task, but also relate to the type of training recommended. After completion of the survey, a training recommendation matrix can be generated based on the following:

**Black** – No training recommended

**Green** – Informal training recommended

**Red** – Training recommended

**Blue** – Recurring/refresher training recommended



# Composite Adversary Team Program United States Department of Energy



- o Training Criteria/Task Validation survey format is provided in the *CAT Function Analysis Training Criteria/Task Validation* section below.
- o The Core CAT will review the training recommendation matrix prior to generation of the report and make changes as required.
- o The Core CAT will develop a report detailing the results of the initial functional analysis and submit it to the CAT Coordinator and Program Manager for concurrence.
- o The Core CAT will review the functional analysis annually, update it as required, and provide revisions to the CAT Coordinator and Program Manager for concurrence.
- Once training tasks are identified, they are entered into a task-to-training matrix to ensure that tasks are being trained as recommended and that needed training resources (i.e., lesson plans, training aids, equipment, and procedures) exist or are developed. Topical areas included in the task-to-training matrix include task number; task description; applicable subtasks; identification of knowledge, skills, and abilities; training recommendation (i.e., type of training); course and lesson number; and objective and objective number.
- The Core CAT will develop a training needs analysis prior to each training session, utilizing student and instructor course critiques from previous training sessions, lessons learned from recent site performance testing activities, upcoming performance testing activities, terrorist trends, and applicable DOE threat policy.
  - o The Core CAT will report the results of the training needs analysis to the CAT Program Manager and CAT Coordinator for concurrence and approval; and once approved, will include the results in preparing the course training plan.

## B. DESIGN

- Based on the functional analysis and training needs analysis, the design of the course will include schedule, content outline, goal(s) of the training session, lessons, events and activities, methods of delivery, safety considerations, and student testing requirements, if applicable.

## C. DEVELOPMENT

- Based on the results of the design phase, the Core CAT or designated instructors and subject matter experts will complete student tests, lesson plans, activity and instructor guides, training aids, props, and team assignments/rosters.
- Whenever possible, National Training Center- (NTC-), DOE site-, or Office of Secure Transportation-developed lesson plans will be utilized for CAT training. If needed, the Core CAT will develop learning objectives and limited-scope performance tests (LSPTs) for those lesson plans to ensure a better fit for training. Each newly developed objective or LSPT will identify the lesson plan and section to which it applies.
- When a lesson plan does not exist for a particular subject or piece of equipment, the responsible instructor will develop a lesson plan following the guidelines in the *CAT-Developed Lesson Plan Requirements* section below.
  - o CAT-developed lesson plans will be reviewed and approved by the CAT Coordinator and the EA-20 Safety Officer.



# Composite Adversary Team Program United States Department of Energy



## D. IMPLEMENTATION

- Scheduling of training is considered when developing the EA-20 annual appraisal schedule. Typically, the schedule reflects the conduct of semi-annual training in the spring and fall in an attempt to monitor the weather conditions and environment. However, based on DOE mission requirements, planning, and resources, there may be instances when CAT training can only be accomplished once in a calendar year. Therefore, every effort must be made to capitalize on this opportunity.
- Unlike a DOE/NNSA site protective force that has dedicated training facilities, the Core CAT must identify a training location for each training iteration. This selection may be done through research, recommendations, previous experiences, or visits. To prevent the training from becoming mundane and/or predictable, consecutive training sessions should not be conducted at the same location. Prior to selecting a location, designated members of the Core CAT will conduct a survey of potential sites to ensure that they replicate or sufficiently emulate conditions typically found at a DOE/NNSA site location, to ensure that training realism is not adversely affected.
- Selection of a training site will be determined by:
  - Availability (schedule)
  - Cost
  - Size
  - Accessibility (site owners will facilitate use of the facility)
  - Environment/Climate
  - Safety considerations.
- The CAT Coordinator will submit a training site justification letter to the CAT Program Manager.
- The CAT Coordinator will draft a letter of intent to the appropriate director, manager, or owner for the use of the training site.
- Once a training site has been selected, the Core CAT, EA-20 Safety Officer, Engagement Simulation Systems (ESS) Representative, and the Field Administrative Coordinator will conduct a planning visit to the site. The purpose of the planning visit is to:
  - Meet appropriate site management personnel/owners
  - Gather site information, such as maps, aerial photos, local operating, and safety procedures/regulations, etc.
  - Identify possible safety hazards
  - Coordinate use and site placement for ESS Trailer (Secure storage of weapons, ammunition, and sensitive items.)
  - Schedule facilities
  - Conduct scenario planning
  - Identify local amenities (i.e., sufficient lodging, food service, medical facilities).
- The EA-20 Safety Officer will address any site-specific considerations in the Site-Specific Brief conducted prior to training.
- The Field Administrative Coordinator will make group reservations for a sufficient number of hotel rooms to accommodate all participants, at preferably one location, (or if necessary, multiple locations); and will distribute pertinent coordinating instructions for room reservations.
- The Core CAT will identify, coordinate with, and schedule qualified instructors, controllers, and support staff to participate in or to support CAT training.
- Training will be conducted in accordance with the approved course training plan.





# Composite Adversary Team Program United States Department of Energy



## E. EVALUATION

- EA-20 Federal and contractor supervisors and managers will be encouraged to observe all instructors and training activities, as time permits, and provide feedback to the CAT Program Manager, CAT Coordinator, and individual instructors regarding instructor professionalism, knowledge, and lesson/activity content.
- Upon completion of each training session, students and instructors will complete course feedback/critique forms. These forms will allow each individual to rate and comment on the following areas:
  - Effectiveness and suitability of the training program
  - Ranking the blocks of instruction/activities based upon the most beneficial and useful
  - Content quality
  - Safety
  - Pace of training (too aggressive - not aggressive enough)
  - Instructor professionalism and knowledge
  - Performance feedback and suggestions for adding or deleting course content
  - ESS support
- Feedback gathered during EA-20 inspections/activities will form an important aspect of training evaluation and will influence the development and design of subsequent CAT training sessions.
- On occasion, the CAT requires training from vendors and/or other government agencies. When such training occurs, it is based on the agency's or vendor's curriculum and lesson materials. On completion of such courses, certificates of completion are copied and placed in the records of the individuals receiving the training. The EA-20 Safety Officer should review hazard analysis for proposed training or develop a Risk Assessment with input from Core CAT. Any accidents/injuries will be reported as required.
- All-terrain vehicles (ATVs) are used extensively by the CAT in performance testing. The Core CAT has been trained and certified by the ATV Safety Institute as instructors who can provide ATV rider course training to members of the field CAT and other support personnel, as required. The Core CAT uses the vendor-provided curriculum to certify trainees and retains individual records of completion/certification.
- Remedial Training. In view of the level of training and expertise of most CAT training participants, failures are a rarity. However, when the need arises to reinforce training or make spot corrections, it will be done immediately. If additional time is needed to make a correction, it will be accomplished at the end of the training day by qualified instructors. Training time during CAT training courses is very limited, thus remediation may be limited, and if it becomes obvious that an individual is unable to perform a task with ease, that fact will be documented in the after-action report. That individual will not be selected to perform that task during subsequent performance testing activities and will be given another role in the OPFOR plan until such time as he/she can demonstrate proficiency in the task.
- If a failure occurs on a written test, a qualified instructor will conduct immediate remediation. The student will be given another opportunity to take the test, and a subsequent failure will require a decision by the CAT Program Manager, CAT Coordinator, and Core CAT as to whether to attempt further remediation or to remove the individual from the CAT program.

## Records Management

- The Core CAT will maintain CAT training session rosters in one file; the rosters will identify the training location, date of training, instructors, and attendees. Associated tests and LSPT documentation will be filed with the rosters. LSPT performance records will only be completed and kept on file when a failure has been documented.



# Composite Adversary Team Program United States Department of Energy



- Course documentation for each training session will be kept on file with the Core CAT and labeled with the month and year that the training occurred. Documentation will include the course training plan; EA-20 CAT Program Manual; medical release forms; lesson plans; activity; instructor guides, etc.

## CAT-Developed Lesson Plan Requirements

- Lesson plans will be approved by the CAT Program Manager, CAT Coordinator, and reviewed by the EA-20 Safety Officer on an annual basis.
- The lesson plan format is provided in the *CAT Lesson Plan Format* below.
- An instructional goal will state the expected learning outcome for the instruction.
- Instructional objectives will be written to enable the student to accomplish the desired level of performance.
- The level of detail included in a lesson plan will be dependent on the complexity and difficulty of the subject matter to be taught. The subject matter expert will assess the level of competence of the target audience and determine the appropriate level of detail needed to ensure that the training goals and objectives are appropriately imparted.
- Whenever objectives are knowledge-based, the lesson plan will include Knowledge Test Criteria (test questions) that can be answered directly from the lesson.
  - Test answer keys will be controlled by qualified instructors to prevent compromise of the materials.
  - All CAT testing will be administered with a test proctor present. Grading will be accomplished as soon as possible, after completion of the test. All knowledge tests will require a minimum passing score of 80 percent.
- Performance-based objectives will be accompanied by LSPTs, which will outline the steps, in proper sequence, to achieve the objective. LSPTs will include:
  - Task reference number from the EA-20 CAT function analysis
  - Performance objective
  - Condition(s): The resources required to complete the instructional objective
  - Standard(s): The minimum expectations as a result of the training (e.g., complete task with 100 percent accuracy; or correctly complete task within a specified amount of time.)
  - Date and time of initial test and/or remedial test
  - Safety considerations
  - Student's printed name line
  - Instructor's signature line
  - Results section, i.e., pass or fail check box.
- The Core CAT will review all lesson plans prior to their expected use.

## Instructor Qualification Criteria

- All instructors must have Basic Instructor Training (BIT) certification through the NTC or equivalency granted through the NTC.
- Primary instructors must have a current certification to the level of training being delivered.
- A BIT-certified instructor must be present when an adjunct instructor who is not BIT certified provides instruction during CAT Training.



# Composite Adversary Team Program United States Department of Energy



## CAT Function Analysis Training Criteria/Task Validation

Participants: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

### Training Criteria/Task Validation Survey

As a group, you will assign a color to each task. The color should be chosen based upon which color BEST FITS the task. The criteria for each color are listed below.

#### Black Criteria

- Task is common across most walks of life.
- Improper task performance makes no difference in CAT operations or causes no personnel harm.

#### Green Criteria

- There is low difficulty in performing the task.
- Task can be learned and competently performed with just guidance from co-workers, procedures, and/or equipment instructions.
- Improper task performance would cause low to moderate consequences.

#### Red Criteria

- Improper task performance may result in moderate to high consequences (injury or a real emergency).
- Related task performance maintains proficiency on this task.
- One-time training is sufficient to learn competent task performance.

#### Blue Criteria

- Task requires frequent practice to maintain proficiency.
- Proper task performance is critical to safety (extreme consequences – serious injury, death, or site emergency).
- Task performed so infrequently that one might forget how to perform task.
- Task must be retrained to refresh perishable skills, knowledge, and abilities in order to remain highly proficient.



# Composite Adversary Team Program United States Department of Energy



<b>Initial Results</b>		Control vs SME		1	2	3	4
		Mean Ratings					
		Control	Mean				
<b>CTPI Pre-Inspection Activities</b>							
PI01	Receive CAT participation notification	2	1.5	II	II		
PI02	Receive travel and lodging instructions	2	1.5	II	II		
PI03	Make travel arrangements	2	1.5	II	II		
PI04	Prepare government furnished equipment (GFE)/personal equipment	2	1.75	II	I	I	
<b>CTPE Pre-Exercise Activities</b>							
PE01	Perform site badging requirements	2	2	I	II	I	
PE02	Attend site-specific training	3	2	I	II	I	
PE03	Receive exercise operations order brief	2	2.5		II	II	
PE04	Conduct windshield tour (day/night)	2	2		III		
PE05	Sanitize personal equipment	2	3		I	II	I
PE06	Prepare essential equipment	3	2.5		II	II	
PE07	Prepare rehearsal area	2	2.25		III	I	
PE08	Receive individual issued equipment	2	1.75	I	III		
PE09	Zero weapons	4	2.75		II	I	I
PE10	Conduct rehearsal	4	2.75		II	I	I
PE11	Conduct site brief back	3	1.75	I	III		
PE12	Attend site ESS safety/rules of engagement brief	1	2.25	I	I	II	
PE13	Attend final team inspection	2	1.75	I	III		
PE14	Deploy to designated pre-staging location	2	2		III		
PE15	Conduct readiness check	3	2.5		II	II	
PE16	Receive authorizations to conduct exercise	2	2.25		III	I	
<b>CTCE Conduct Exercise</b>							
CE01	Follow all Exercise Controller commands	4	3.25			III	I
CE02	Perform movement to target by foot	4	2.5		II	II	
CE03	Perform movement to target by vehicle	4	2.75		I	III	
CE04	Breach obstacles	4	3.25			III	I
CE05	Perform distractions/diversions	4	2.75		II	I	I
CE06	Provide security/support functions	4	2.5		II	II	
CE07	Perform ambush	4	2.75		II	I	I



## Composite Adversary Team Program United States Department of Energy



<b>Initial Results</b>	Control vs SME Mean Ratings		1	2	3	4
	Control	Mean				
CE08 Perform actions on objective	4	2.75		II	I	I
CE09 Conduct radiological sabotage of target material	4	2.5		II	II	
CE10 Conduct theft of target material	4	2.5		II	II	
CE11 Ex-filtrate	4	2.75		II	I	I
CE12 Engage protective force	4	2.75		I	III	
CE13 Maintain communications	3	2.75		II	I	I
CE14 Utilize night optical device (NOD)	4	3.25		I	I	II
CE15 Utilize respiratory protection equipment	2	2.5		II	II	
CE16 Utilize thermal optical device	4	3.25		I	I	II
CE17 Utilize rangefinder and spotting scope	3	3		I	II	I
<b>CTPA Post Exercise Activities</b>						
PA01 Unload all weapons	4	3.75			I	III
PA02 Account for all personnel	2	3			III	
PA03 Account for all equipment	2	3			III	
PA04 Report all injuries	3	2.25	I	I	II	
PA05 Turn in equipment	2	1.75	II	I	I	
PA06 Police rehearsal area	2	1.5	II	II		
PA07 Participate in hot-wash	2	1.5	II	II		
PA08 Receive departure instructions	1	1	III			
PA09 Submit travel reimbursement	2	1	III			



# Composite Adversary Team Program United States Department of Energy



## CAT Lesson Plan Format

UNITED STATES  
DEPARTMENT OF ENERGY  
OFFICE OF SAFEGUARDS AND SECURITY ASSESSMENTS



### COMPOSITE ADVERSARY TEAM TRAINING

TITLE:

LESSON PLAN NUMBER: CAT XXX

TASK REQUIREMENT: DOE O 470.4B Chg 2 (MinChg), Safeguards and Security Program  
DOE O 473.3A, Chg 1 (MinChg) Protection Program Operations

TARGET GROUP: Composite Adversary Team Members

TIME ALLOTTED:

INSTRUCTOR: TBD

METHOD OF INSTRUCTION: Lecture, Demonstration, and Practical Application

PREPARED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

SAFETY REVIEW BY: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

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# Composite Adversary Team Program United States Department of Energy



---

Lesson CAT XXX – (Title)  
GOAL AND OBJECTIVES

---

## **Instructional Goal**

(For example) Upon successful completion of this lesson, the student will be familiar with loading, firing, unloading and chamber cleaning of the Engagement Simulation System (ESS) .50 cal. Sniper Rifle.

## **Instructional Objectives**

Upon successful completion of this lesson, the student will be able to:

1. *For example:* Demonstrate loading the ESS .50 caliber sniper rifle.
2. Demonstrate firing the ESS .50 caliber sniper rifle.
3. ETC.,

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# Composite Adversary Team Program United States Department of Energy



Lesson CAT XXX – (Title)  
Performance Criteria

**PERFORMANCE OBJECTIVE 01:**

TASK REFERENCE:

CONDITIONS:

STANDARD:

PERFORMANCE CRITERIA	SAT	UNSAT
1.		
2.		
3.		

INITIAL TEST:      DATE: \_\_\_\_\_      PASS: \_\_\_\_\_      FAIL: \_\_\_\_\_

REMEDIAL TEST:      DATE: \_\_\_\_\_      PASS: \_\_\_\_\_      FAIL: \_\_\_\_\_

STUDENT'S NAME: \_\_\_\_\_  
(PRINT)

INSTRUCTOR'S SIGNATURE: \_\_\_\_\_

(Page) # of # (of Pages)

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# Composite Adversary Team Program United States Department of Energy



Lesson CAT XXX – (Title)  
Performance Criteria

**PERFORMANCE OBJECTIVE 02:**

TASK REFERENCE:

CONDITIONS:

STANDARD:

PERFORMANCE CRITERIA	SAT	UNSAT
1.		
2.		
3.		

INITIAL TEST:      DATE: \_\_\_\_\_      PASS: \_\_\_\_\_      FAIL: \_\_\_\_\_

REMEDIAL TEST:      DATE: \_\_\_\_\_      PASS: \_\_\_\_\_      FAIL: \_\_\_\_\_

STUDENT'S NAME: \_\_\_\_\_  
(PRINT)

INSTRUCTOR'S SIGNATURE: \_\_\_\_\_



# Composite Adversary Team Program United States Department of Energy



---

Lesson CAT XXX – (Title)  
COURSE MATERIALS AND REFERENCES

---

Materials

- 
- 
- 

Visual Aids

- *NONE*

Handouts

- *NONE*

References

- *NONE*

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# Composite Adversary Team Program United States Department of Energy



TITLE: Lesson CAT XXX – (title here)	Instructor Notes:
<p><b>I. INTRODUCTION</b></p> <p><b>A. INSTRUCTIONAL GOAL</b></p> <p>Upon successful completion of this lesson, the student will be ...</p> <p><i>Complete this sentence by using one of the following:</i></p> <ul style="list-style-type: none"><li>- familiar with...</li><li>- able to...</li><li>- will understand...</li></ul> <p><b>B. INSTRUCTIONAL OBJECTIVES</b></p> <p>Upon successful completion of this lesson, the student will be ...</p> <p><i>Complete this sentence by using one of the following:</i></p> <ul style="list-style-type: none"><li>- familiar with...</li><li>- able to...</li><li>- will understand...</li></ul> <p>1.</p> <p>2.</p> <p>3.</p> <p><b>II. CHARACTERISTICS</b></p> <p><b>A. SPECIFICATIONS</b></p> <p>1.</p> <p>2.</p> <p style="padding-left: 40px;">a.</p> <p style="padding-left: 40px;">b.</p>	

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# Composite Adversary Team Program United States Department of Energy



TITLE: Lesson CAT XXX – (title here)	Instructor Notes:
<p><b>B. CAPABILITIES/LIMITATIONS</b></p> <ul style="list-style-type: none"><li>1.</li><li>2.<ul style="list-style-type: none"><li>a.</li><li>b.</li></ul></li></ul> <p><b>III. OPERATION</b></p> <p><b>A.</b></p> <ul style="list-style-type: none"><li>1.<ul style="list-style-type: none"><li>a.</li><li>b.</li></ul></li><li>2.<ul style="list-style-type: none"><li>a.</li><li>b.</li></ul></li></ul> <p><b>B.</b></p> <ul style="list-style-type: none"><li>1.<ul style="list-style-type: none"><li>a.</li><li>b.</li></ul></li></ul>	
<ul style="list-style-type: none"><li>2.<ul style="list-style-type: none"><li>a.</li><li>b.</li></ul></li></ul>	

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# Composite Adversary Team Program United States Department of Energy



TITLE: Lesson CAT XXX – (title here)	Instructor Notes:
<p><b>IV. SAFETY</b></p> <p><b>A.</b></p> <ol style="list-style-type: none"><li>1.</li><li>2.</li><li>3.</li></ol> <p><b>B.</b></p> <ol style="list-style-type: none"><li>1.</li><li>2.</li><li>3.</li></ol> <p><b>V. CONCLUSION</b></p> <p><i>Your final summary/closing remarks go here</i></p>	

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## Appendix 9: Initial Request for CAT Support of EA Performance Testing (Example)

**To:** Composite Adversary Team (CAT) Members, Managers, and Federal Points of Contact

**Subject:** Initial Request for Support for the Office of Enterprise Assessments Performance Testing at [SITE NAME]

CAT members and managers,

This initial request determines availability for supporting the Office of Enterprise Assessments (EA) CAT during performance testing at [SITE] in [MONTH]. EA considers your support to be vital in completing these efforts as directed by the Secretary of Energy.

Typically, support for performance testing activities, including travel to and from the location, requires CAT members to be away from their home site for approximately 7-9 days.

- This request is for performance testing scheduled for [INSERT DATES]. These dates are tentative and, as always, could fluctuate a day or two in either direction.

Please check your schedules/vacation plans and after discussing with your management and spouse/family, please respond to me by close of business [INSERT DATE] as to whether you are available. Upon receipt of initial availability, the team composition will be finalized, and a second memo will be sent to the requested CAT members and their managers.

Once again, thank you for your continued support of the CAT. Please feel free to call me at [INSERT PHONE #] should you have additional questions.

[NAME]  
CAT Coordinator

## Appendix 10: CAT Member Request for Support (Example)

As a result of the initial email request on [DATE] for Composite Adversary Team (CAT) members to review their schedules and obtain management approval to attend and participate, the below listed CAT members are requested to support the upcoming Office of Enterprise Assessments (EA) assessment and performance testing at [SITE NAME].

[NAMES]

### Field CAT:

[NAMES]

Dates: [ASSESSMENT DATES], [TRAVEL DATES] are designated travel days. All CAT members will travel on the same days. Please keep in mind that a weather day could affect this schedule; however, make your airline reservations based on the above travel dates. The [NAME] airport is the closest location to fly into.

Lodging arrangements have been made at the [HOTEL NAME, ADDRESS, AND PHONE NUMBER]. Team members must call to receive their confirmation numbers and guarantee room reservations by [DATE]. You may also visit the website at [URL]. If you are unable to participate or need to change or cancel your reservation for any reason, please notify [NAME], at [PHONE NUMBER].

Each site should have funding from EA in place to cover travel, per diem, and miscellaneous costs. [NAME & PHONE NUMBER] is the point of contact for funding should your budget personnel have issues or concerns.

In a separate email, I will advise all CAT members who are attending on what equipment to bring and will provide the initial meeting time and location.

**It is critical that everyone respond as soon as possible, verifying availability to attend, and that travel reservations have begun.**

Should you have additional questions or need assistance, please feel free to call me at (XXX) XXX-XXXX. Once again, thank you for your support.

[NAME]

CAT Coordinator

**Appendix 11: CAT Medical Release Form  
CAT Self-Assessment Health**





# Composite Adversary Team Program United States Department of Energy



## CAT Medical Release Form

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U.S. Department Of Energy  
Office of Enterprise Assessments

### Instructions

- Provide the physician with the provided information found in the CAT Self-Assessment Health Questionnaire on page 4 of this form. The CAT Self-Assessment Health Questionnaire must be completed prior to obtaining an annual medical examination.
- Obtain an annual medical examination from a licensed personal physician.
- Assist the personal physician in understanding the type and extent of anticipated physical activity. Activities may include, but are not limited to, running short distances, crawling, and climbing ladders/stairs. Activities may be performed in adverse environmental conditions (e.g., high/low ambient air temperatures, high/low levels of humidity, and in locations with altitudes up to 7,000 feet).
- Have a physician complete this medical release form.
- Submit the completed medical release form to the Composite Adversary Team Program Manager or Protective Force topic lead each year as applicable.

Name of Protective Force Role Player: \_\_\_\_\_

I hereby attest that \_\_\_\_\_ is physically capable of participating in EA job duties in the following function:

- Moderate Response Protective Force Role Player
- Mobile Response Protective Force Role Player

Additionally, the individual identified above is not currently taking prescription medications and/or over-the-counter medications that may pose any risk to his/her health or well-being while participating in job duties in conditions such as those described below.

Date of Medical Examination: \_\_\_\_\_

Licensed Physician: \_\_\_\_\_



# Composite Adversary Team Program United States Department of Energy



U.S. Department Of Energy  
Office of Enterprise Assessments  
CAT Medical Release Form continued

## **Background**

The U.S. Department of Energy's (DOE's) Office of Safeguards and Security Assessments is principally responsible for conducting assessments on behalf of the Secretary of Energy, Congress, and/or other senior stakeholders. The purpose of these assessments is to evaluate field site emergency response capabilities.

As a key element of these evaluations, the Office of Security Assessments conducts force-on-force (FOF) performance tests using a "red cell" aggressor force known as the DOE Composite Adversary Team (CAT). During these performance tests, DOE tactical response forces must defend against simulated terrorist attacks planned and executed by the CAT. In order to enhance the realism of these complex tactical exercises and to maintain the proficiency of the CAT, the Office of Security Assessments conducts semi-annual CAT training using selected assessment team staff members to role play as protective force officers. Such training generally manifests itself in a series of exercises in which the CAT and protective force role players participate in FOF war games using blank-fire assault rifles that have been specially modified with laser engagement transmitters. Participants are also equipped with special individually worn sensor harnesses that record the accuracy of opposing team members' weapons fire. As such, the Office of Security Assessments and its principal support services contractor require assessment team staff members who have been selected to perform duties as protective force role players during CAT training to undergo an annual medical examination. The scope and focus of the examination should be such that it examines the individual's physical readiness to participate in one of two role-player functions: moderate response protective force role player and mobile response protective force role player.

## **Moderate Response Protective Force Role Player:**

A moderate response protective force role player operates from a static defensive position or from a mobile security patrol vehicle under day and low-light conditions as well as varying environmental conditions (e.g., high/low ambient air temperatures, high/low levels of humidity, and in locations with altitudes up to 7,000 feet). Anticipated significant physical activities are not limited to: operating semi-automatic and fully-automatic blank-fire weapons from a stationary position; rapid motor functions such as reloading firearms in a simulated combat environment; wearing and/or carrying approximately 15 pounds of tactical weapons and equipment; and quickly maneuvering distances less than 25 yards with assigned equipment. Sustained activity at these levels will typically range from approximately 15 to 20 minutes. Of significant note, no hand-to-hand contact is permitted among participants, and all participants are required to wear appropriate personal protective equipment (PPE) (e.g., eye and hearing protection, pro-tech helmets, and knee and elbow pads) during the training. Additionally, FOF training activities are observed by a certified safety professional and certified exercise physiologist, and rapid access to emergency medical services is available at all times.



## Composite Adversary Team Program United States Department of Energy



U.S. Department Of Energy  
Office of Enterprise Assessments  
CAT Medical Release Form continued

### Mobile Response Protective Force Role Player:

A mobile response protective force role player operates as a foot patrol or from a mobile security patrol vehicle under day and low-light conditions as well as varying environmental conditions (e.g., high/low ambient air temperatures, high/low levels of humidity, and in locations with altitudes up to 7,000 feet). Anticipated significant physical activities include, but are not limited to, performing all functions of a moderate response protective force role player as enumerated above. Additionally, mobile response protective force role players typically participate in more intense simulated gun battles, carry heavier equipment (approximately 35 pounds or less), and are required to quickly maneuver greater distances (approximately one-half mile or less). Sustained activity at these levels will typically range from approximately 15 to 20 minutes. Of significant note, no hand-to-hand contact is permitted among participants and all participants are required to wear appropriate PPE (e.g., eye and hearing protection, pro-tech helmets, and knee and elbow pads) during the training. Additionally, FOF training activities are observed by a certified safety professional and certified exercise physiologist, and rapid access to emergency medical services is available at all times.



# Composite Adversary Team Program United States Department of Energy



## CAT Self-Assessment Health Questionnaire

U.S. Department Of Energy  
Office of Enterprise Assessments

This questionnaire is a simple screening tool used to self-identify and document that either there have been no significant changes in your health since your last annual physical screening exam or that there have been changes in your health and you need to seek medical attention before further participation as a protective force role player or evaluator.

These questions are from a modified pre-participation screening questionnaire developed by the American Heart Association and American College of Sports Medicine.

Please read carefully and answer each question honestly. Since your last annual physical screening exam (circle the answer):

### Have you had any of the following?

- Yes / No A heart attack
- Yes / No Heart surgery
- Yes / No Cardiac catheterization
- Yes / No Coronary angioplasty
- Yes / No Pacemaker/implantable cardiac defibrillator/rhythm disturbance
- Yes / No Heart valve disease
- Yes / No Heart failure
- Yes / No Heart transplantation
- Yes / No Congenital heart disease

### Have you experienced any of the following?

- Yes / No Chest discomfort with exertion
- Yes / No Unreasonable breathlessness
- Yes / No Dizziness, fainting, or blackouts

### Other Health Issues:

- Yes / No Have you developed diabetes?
- Yes / No Have you developed asthma or any other lung disease?
- Yes / No Do you have a burning or cramping sensation in your lower legs when walking short distances?
- Yes / No Do you have musculoskeletal problems that limit your physical activity?
- Yes / No Have you started taking prescription medications(s)?
- Yes / No Do you believe that you cannot safely participate as an evaluator or protective force role player?

I understand that if I answer “yes” to one or more of the above statements throughout the year, I should consult my personal physician and obtain another physical screening exam before further participation as a protective force role player or evaluator.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

**Appendix 12: CAT Visiting Participant Medical Release Form**



## Composite Adversary Team Program United States Department of Energy



### CAT Visiting Participant Medical Release Form

---

#### Background

The U.S. Department of Energy (DOE) Office of Enterprise Assessments (EA) is principally responsible for conducting independent assessments on behalf of the Secretary of Energy. The purpose of these assessments is to verify that the department can effectively respond to emergencies and to ensure that tactical response forces at various field sites are adequately protecting the critical nuclear assets within their custody. As a key element of these assessments, EA conducts force-on-force (FOF) performance tests using a "red cell" aggressor force known as the DOE Composite Adversary Team (CAT). To enhance the realism of these complex tactical exercises and to maintain the proficiency of the CAT, EA conducts semi-annual training, using selected assessment team members to role play as protective force officers. Such training generally includes a series of exercises where the CAT and protective force role players participate in FOF war games using blank-fire assault rifles that have been specially modified with laser engagement transmitters. Participants are also equipped with special individually worn sensor harnesses that record the accuracy of opposing team members' weapons fire.

Uniformed professionals from the military or other non-DOE facilities, who are typically enrolled in approved safety and health programs, are allowed to participate in EA activities after signing a medical release form, indicating that no known conditions exist that would endanger the participant or other participants. As a participant you may be requested to operate either on foot or from a vehicle under day and low-light conditions as well as varying environmental conditions (e.g., high/low ambient air temperatures, high/low levels of humidity, and in locations with altitudes up to 7,000 feet). Participants are typically involved in intense simulated gun battles, carry heavy equipment (approximately 75 pounds or less), and are required to quickly maneuver distances of up to a half mile. High intensity activity levels will typically range from 15 to 20 minutes; however, training or performance testing can last for several hours. No hand-to-hand contact is permitted among participants, and all participants must wear appropriate personal protective equipment (e.g., eye and hearing protection, pro-tech helmets, and knee and elbow pads) during training and performance testing. Additionally, training activities are observed by a health and safety professional, and rapid access to emergency medical services is available at all times.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_

**Appendix 13: CAT Medical Release Status Roster**





## Appendix 14: Baseline Safety Controls



# Composite Adversary Team Program United States Department of Energy



## Baseline Safety Controls

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- General
  - Only players who have received Engagement Simulation Systems (ESS) training from a U.S. Department of Energy (DOE) National Training Center (NTC)-certified training instructor will be permitted to participate in Composite Adversary Team (CAT) activities.
  - Carbon monoxide may be of concern while firing blank ammunition in enclosed areas, such as closed vehicles, hallways, and small rooms. Potential areas for overexposure are evaluated to determine whether the area is deemed safe, compensatory measures are introduced (e.g., ventilation), or the area is removed from play.
  - All ascents and descents from elevated positions should be by ladder or stairway maintaining three points of contact.
  - Participants should avoid roof hazard areas such as lightning rods and guide wires. Within six feet of an unprotected edge, players must assume a prone position. Personnel shall not extend any body part outside of the unprotected edge.
  - Only knives and other cutting implements necessary to perform activities essential to the training will be permitted within the training boundary and shall not be used as weapons or to simulate weapons.
  - Exercise/training area boundaries are determined during safety walkdowns and dictated by the hazards present at the time of the planned activities. Off-limits areas are also determined. Boundaries and off-limits areas are appropriately marked and identified to all participants during the safety brief.
  - An “exercise freeze” is a safety/emergency hold that is used to correct significant safety-related problems or to respond to an actual emergency. Any person observing a life-threatening situation has the responsibility to “stop work” by alerting the CAT Coordinator, Core CAT, or any controller. If an exercise freeze or stop work occurs, players must immediately stop what they are doing and follow the directions provided.
- Health and Fitness
  - All participants need to be aware of the potential adverse impacts of the activity. Certain activities can exert a great deal of physiological stress on the body, in part by exercising specific muscle groups to a higher degree than normal. Many activities may be combined within a very short period of time and may be conducted at higher-than-normal altitudes and during times when temperature extremes may pose health and safety concerns.
  - Players, instructors, and technicians who work with munitions or munitions simulators, shall not consume alcohol within eight hours before activities start. Consuming alcohol impedes both mental and motor skills.
  - Possessing alcohol or illegal drugs is strictly prohibited. If a participant is believed to be under the influence or there is any presence of alcohol, the participant must be immediately removed from activities and appropriate follow-up action taken in accordance with pre-established regulations and/or directives.



## Composite Adversary Team Program United States Department of Energy



- Participants will be “on duty” for no more than 14 consecutive work hours, immediately followed by a break (physically away from the area) for a minimum of 8 hours to allow sufficient time for bed rest, meals, and other necessities. Sleep deprivation/fatigue can cause poor judgment, bad decisions, and accidents.
- Personnel should stay alert for changing weather conditions. The CAT Program Manager, CAT Coordinator, Safety Officer, and Performance Test Director/Coordinator where applicable, work jointly to address changing weather conditions during CAT activities.
- During hot weather, personnel must protect themselves from such concerns as glare, sunburn, dehydration, heat cramps, heat exhaustion, and heat stroke. Hot weather also increases animal activity, resulting in potential exposures to venomous snakes and spiders, disease-carrying insects, and other wildlife. Potentially severe allergic or toxic reactions to a wide spectrum of plant life are also possible. Hot, dry winds result in large amounts of dust and dirt that can impair vision and cause respiratory reactions.
- Personnel must protect themselves during cold weather conditions from such concerns as hypothermia, an acute problem resulting from prolonged cold exposure and heat loss; frostbite, damage done to skin and cells of the body caused by exposure to extreme cold; and shivering, a bodily function in response to early hypothermia or the cold.
- Personnel shall use appropriate precautions when rendering first aid, in accordance with their level of training. During conduct of various CAT activities, minor injuries can occur, resulting in exposure to human blood or other bodily fluids. Personnel should use appropriate care to avoid contact with blood or other bodily fluids. Any potential contact must be immediately reported to the nearest instructor. DOE/National Nuclear Security Administration (NNSA) sites and each CAT training event has a designated medic certified in cardio-pulmonary resuscitation/automated external defibrillator and first aid. Participants requiring first aid treatment must contact an instructor, safety personnel, or a Core CAT member for assistance.
- In the event of a minor injury that does not require immediate/ongoing medical attention, coordinate with on-site management to arrange transport of injured or ill personnel to appropriate medical care facilities using other personnel resources. The designated medic will remain on-site to ensure continuous medical support for ongoing training operations.
- Any personnel utilizing respirators will follow Occupational Safety and Health Administration (OSHA) requirements for respirators.
- Equipment
  - Equipment shall be used only for its intended purpose, in accordance with the manufacturer’s instructions, and in compliance with applicable laws and standards. Safety-related equipment shall not be altered in any way that could impede it from performing its intended safety function. Types of safety equipment that may be used include the following:
    - Site- and EA-supplied radios
    - Basic tactical battle clothing
    - Helmets
    - U.S. Department of Transportation (DOT), military, or other Safety Officer-approved helmets for use on all-terrain vehicles (ATVs)



## Composite Adversary Team Program United States Department of Energy



- Special vision equipment (e.g., binoculars and night optical devices)
- Knee and elbow pads
- Gloves
- High-top boots with ankle support
- Eye and face protection compliant with 29 Code of Federal Regulations (CFR) 1910.133, *Eye and Face Protection*
- Hearing protection compliant with 29 CFR 1910.95, *Occupational Noise Exposure*
- Respirators (Personnel who are required to wear a respirator as a control to an inhalation hazard must have a current respirator fit test card).
- Equipment that will be used shall be inspected for usability and operability prior to activity initiation. Individual participants are ultimately responsible for their safety and shall inspect all gear that they may use. Questionable equipment shall be immediately removed from service and shall not be used under any circumstances. Questions on the usability of any gear should be directed to the CAT Coordinator or Core CAT.
- Vehicles
  - All drivers must observe all site requirements and applicable laws relating to vehicle operation.
  - Vehicles must not be mounted or dismounted until after they come to a complete stop.
  - Personnel must not ride on the outside of vehicles, including the beds and tailgates of pickup trucks. Personnel may be allowed to ride in the bed of a pickup truck if they are lying or sitting in the bed, but only after being given specific permission to do so by the CAT Coordinator and Safety Officer.
  - All personnel in moving vehicles must wear seat belts unless given specific direction otherwise by the CAT Coordinator and Safety Officer.
  - Vehicle maneuvers (e.g., accelerations, decelerations, cruising, and turns) must be accomplished in accordance with local vehicle operating procedures.
  - When an activity requires a roadblock, the roadblock will be simulated by placing a blocking vehicle on the shoulder of the road and notifying the CAT Coordinator and Core CAT Controller that a roadblock has been established. If the blocking vehicle's presence could effectively obstruct the roadway, activity controllers should prevent the vehicle being blocked from passing.
  - Players shall not take up positions under vehicles.
  - Only players who are passengers are allowed to shoot from moving vehicles. Care must be exercised that spent casings do not distract the driver.
- Pyrotechnics
  - Personnel who work with explosives must be trained and qualified in the tasks to be performed and must understand all safety standards, requirements, and precautions that apply to their work.



## Composite Adversary Team Program United States Department of Energy



- All operations are conducted in a manner that exposes the minimum number of people to the smallest quantity of explosives for the shortest period of time, consistent with the activities being conducted.
- All residue from pyrotechnic items are removed and turned over to appropriate personnel for proper disposal.
- Transportation for all approved munitions is conducted by ESS Support Program personnel only and in accordance with DOT regulations. Explosive devices must not be carried on commercial airline flights or in privately owned vehicles.
- Munitions shall be protected from abnormal stimuli or environments such as impact, shock, high temperatures, and open flames. Smoking is prohibited within 50 feet when handling, transporting, or storing munitions.
- Live-fire weapons and live ammunition will not be allowed in the exercise/training area.
- All outdoor operations, whether at the staging area or at training areas, shall be discontinued during storms that are within three miles of the staging or exercise/training areas. If threatening weather conditions are present, a lightning detector will be used. After receipt of a lightning alert, activities involving explosives may be completed only when preparation has progressed to a point that discontinuing the exercise would present a greater exposure to personnel than its completion.
- Smoke grenades will be used in accordance with the DOE requirements and the approved safety risk assessment for the activity.
- Pyrotechnic devices shall be used only in areas identified as safe by the CAT Coordinator and Safety Officer and, where applicable, by the site's fire protection or safety organizations.
- Cartridges for rocket signature simulator sleeves ignite at the rear of the weapon (common names for shoulder-fired rockets include light anti-armor weapon, AT4, and RPG). Anyone firing a shoulder-fired rocket simulator must verify that the danger zone is clear (i.e., 30 feet to the rear and 5 feet to all sides of the shoulder-fired rocket simulator). The operator shall not arm the shoulder-fired rocket simulator until the target is sighted. If the shoulder-fired rocket is not fired, it must be returned immediately to the safe position. Prior to turn-in, if the shoulder-fired rocket simulator has not been fired, it shall be returned to an unloaded/tube-empty position. Training participants shall receive comprehensive instruction on the operation and safety considerations of the shoulder-fired rocket simulator before use.
- Participants deploying diversionary devices (e.g., flash-bangs) must be properly trained in their use. Diversionary devices shall not be thrown within 50 feet of unprotected individuals.
- Participants deploying training grenades (e.g., "nerfs" and "rubber") must be properly trained in their use by a Core CAT member.
- Dud pyrotechnics will be handled only by trained personnel who possess current instructor certifications for the devices used. Personnel must not approach a dud simulator and should mark its location and immediately notify the CAT Coordinator or Core CAT, who will notify trained personnel. The CAT Coordinator must maintain documentation certifying the qualifications of CAT program personnel who are authorized to handle duds.



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- ESS
  - All participants must conduct their activities and weapons manipulations in conformance with established ESS weapons safety rules as described during the safety briefing and in such a manner as to inflict the minimum insult to the training area environment.
  - No live-fire weapons or live ammunition of any type are allowed in the exercise/training area.
  - The Core CAT, Safety Officer, and/or designated personnel will search all equipment bags and tactical vests for live ammunition before daily activities. Annual training spans several days, and rental vehicles are often used for training and transportation to and from the hotel. Accordingly, vehicles used during activities and bags/equipment removed from the training location will be re-inspected before the next day's activities. Immediately before ESS activities begin, participants will inspect their weapons, ammunition, and person to ensure that only blank ammunition and properly equipped ESS weapons are being used.
  - At the conclusion of activities, participants will be reminded to search their equipment bags/tactical vests for munitions, such as blank ammunition, flash-bangs, and smoke grenades, to ensure that nothing is inadvertently carried to the airport.
  - Equipment from the ESS Support Program workspace or vehicles will not be removed without the knowledge and authorization of the responsible ESS representative. All weapons are inspected and maintained by NTC-certified armorers, and all ESS equipment is accounted for before CAT program participants are released.
  - All ESS weapons/magazines must be modified to use only blank ammunition and be clearly marked.
  - All ESS weapons that will be used shall be equipped with either a live-round inhibitor, blank-fire adapter, or blast deflector and one or more additional engineered layers of safety to prevent the accidental introduction of live rounds.
  - All weapons must remain unloaded until the window has been opened. Participants should load weapons to a half-load configuration until directed to fully load as part of the exercise/training. All weapons are to be unloaded and placed on safe and then receive a second check when the window is closed.
  - At the conclusion of the activities, excess blank ammunition will not be fired, but instead turned in at the designated location for use in future activities.
  - When participants are within 10 feet of each other they will not discharge their weapons until safe to do so and will follow this procedure:
    - At least one of the participants will announce "DANGER CLOSE" and will repeat "DANGER CLOSE" in a loud voice until a controller acknowledges the situation.
    - When a controller is present, the controller will make the call as to who is killed (one or both) based on the tactical advantage and readiness to engage.
    - If a controller is not present, the players will make the call themselves consistent with the exercise code of conduct.
    - In either case, the surviving player(s) will discharge their weapons in a safe direction. If a safe direction is not available, the weapon will not be discharged, and play will continue.



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- ESS equipment operates by firing and detecting specially encoded laser signals. The lasers meet the U.S. Food and Drug Administration eye safety requirements (i.e., 21 CFR 1040.10, *Laser Products*; 21 CFR 1040.11, *Specific Purpose Laser Products*; and American National Standards Institute, Inc. (ANSI) Z136.1-6, *American National Standard for Safe Use of Lasers*) and do not present an undue hazard to the eyes during normal operations. No special eye protection is required, but participants should not stare into the beam when within 10 feet (three meters) of the laser, nor view the beam with optical instruments, such as binoculars, when within 45 feet (15 meters).
- Transmitters of all laser engagement systems must carry caution stickers that are visible to persons in the vicinity of the transmitter and that contain the words, "INVISIBLE LASER RADIATION."



**Appendix 15: CAT First Aid Kit Inventory List**





## Composite Adversary Team Program United States Department of Energy



### CAT First Aid Kit Inventory List

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- Personal Protective Equipment (PPE):** gloves, eye protection, mask, etc.
- Wound care supplies:** gauze, pads, bandages, adhesive strips, tape, trauma pads, etc.
- Bleeding control supplies:** tactical combat casualty care (TCCC)-approved tourniquets, chest seals, and hemostatic gauze
- Basic splinting materials:** cravats, rigid splint(s), etc.
- Basic ventilation equipment and adjuncts:** mask, nasopharyngeal airway, manual suction, etc.
- Patient assessment equipment:** stethoscope, sphygmomanometer, pulse oximeter, etc.
- Blister kit:** moleskin, mole foam, tape, etc.
- Over-the-counter (OTC) medications:** Ibuprofen, Acetaminophen, Loperamide, Diphenhydramine, etc.
- Bloodborne Pathogen Kit**
- Automated External Defibrillator (AED)**



