# National Training Center

## Protective Force Training Department

### Standard Operating Procedure

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<tr>
<th>Title:</th>
<th>Integrated Safety and Security Training and Evaluation Complex (ISSTEC) Operations</th>
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<tr>
<td>Number:</td>
<td>PFT-SOP-643</td>
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<td>Revision:</td>
<td>9</td>
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**Submitted By:**
- Grady Smith, Rangemaster
  Protective Force Training Department
  
  Initials: X

- Mark Quintana, Manager
  Protective Force Training Department
  
  Initials: X

**Reviewed By:**
- Tim Wickett, LFR Safety Specialist
  ES&H Department
  
  Initials: X

- Charlie Carson, ES&H Specialist
  ES&H Department
  
  Initials: X

**Approved By:**
- Wayne Adams, Director
  Facilities Operations
  
  ORIGINAL SIGNED 01/09/20
  
  Date:

- General Manager
  DOE National Training Center
  
  ORIGINAL SIGNED 01/10/20
  
  Date:

- Officially Designated Security Authority
  DOE National Training Center
  
  ORIGINAL SIGNED 01/10/20
  
  Date:
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### REVISION HISTORY

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| 9    | 01/10/20 | - Global:  
  - “Observer” changed to “Visitor”.  
  - “Armorer” changed to “Gunsmith”.  
  - “PFTD Administrative Assistant” changed to “LFR Operations Administrative Assistant”.  
- 2.0, Scope:  
  - Changed “including NTC Federal and contractor employees” to “including all Federal and contractor employees”.  
  - Deleted “NOTE: ESS weapons are not authorized for use at the NTC’s Live Fire Range (LFR)”.  
- 6.0, Policy: Deleted “or PFTD Manager” from “Any activities conducted outside of the fence line must be coordinated through the Rangemaster.”  
- (New) Item 7.4.6: Added “Ensures blue and orange flag is displayed when ESS activities are in progress and access to the facility is prohibited. When visibility is limited by weather conditions or darkness, the flashing blue and orange beacon must be used. The flag will be secured and/or the flashing blue and orange beacon will be turned off at the conclusion of ESS activities.”  
- Item 7.4.9: Changed “Channel A4” to “Channel B4”.  
- Item 7.4.10:  
  - Changed “Maintains the following ISSTEC records” to “Maintains the following ISSTEC records”.  
  - Added “e. Building 9820 Pre- and Post-Training Walk-Through Form (Appendix K)”.  
- Item 7.5.5: Deleted “PFTD Manager”.  
- Item 7.5.6.11: Replaced “ESS exercise plan” with “test plan”.  
- Item 7.8.1: Added “testing, demonstration, and evaluation of equipment, vehicles, weapon systems and munitions, and technologies”.  
- Section 8.0, Facilities:  
  - Added “Building 9825K: A communications building. It is a “No Access – Area Out of Play” building during ESS training.”  
  - Building 9820: Added “It is intended to replicate a residential facility.”  
  - Added “Building 9820A: A storage building. It is a “No Access – Area Out of Play” building during ESS training.”  
- Item 9.2.2:  
  - Changed “An emergency use phone” to “A phone”, and changed “for off-hour and/or weekend emergency use” to “for emergency use”.  
  - Added “A phone is located inside Building 9820 for emergency use.”  
- Item 9.5.2: Deleted “DMC and SecuriBlank™”.  
- Item 9.6.2: Deleted “3. PFTD Manager”.  
- Item 9.7.1: Changed “A test plan and a risk analysis report must be developed for activities not addressed in NTC SOPs or risk analysis reports, and submitted to the Rangemaster a minimum of 4 weeks in advance.” to “A test plan and a risk analysis report must be developed for all activities conducted at ISSTEC, including testing, demonstration, and evaluation of equipment, vehicles, weapon systems and munitions, and technologies, and submitted to the Rangemaster a minimum of 2 weeks in advance.”  
- Section 9.7.2 Item f: Added “and technologies”.  
- Item 9.8 Note: Changed “prior approval of the Rangemaster and PFTD Manager” to “prior approval of the Rangemaster or Assistant Rangemaster and the Facilities Director”.


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<tr>
<td>8.1</td>
<td>09/05/19</td>
<td>- (Added) &quot;7.2.5 Issues appropriate keys for ISSTEC use during non-normal hours to approved users.”</td>
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|      |            | - Item 7.4.10: Changed "Maintains ISSTEC Use Logs (Appendix A) and Key issue log," to "Maintains the following ISSTEC records: a. ISSTEC Use Logs (Appendix A); b. ISSTEC Pre-Activity Statements, as required; c. ISSTEC Post-Activity Statements and Reports, as required; d. Key issue control and key logs."
<p>|      |            | - (Added) &quot;7.4.16 Issues appropriate keys for ISSTEC use during non-normal hours to approved users.”                                                                                                                    |
|      |            | - Section 8.0, Facilities: Added bullet for Building 9820.                                                                                                                                                                |
|      |            | - Item 10.5.2: Changed &quot;Approved users will be issued appropriate keys for ISSTEC use during non-normal hours.” to &quot;The NTC Rangemaster or Assistant Rangemaster will issue appropriate keys for ISSTEC use during non-normal hours to approved users.” |
|      |            | - Figure B.1, ISSTEC General Site Layout: Replaced with updated figure that includes new Building 9820.                                                                                                                     |
| 8    | 07/03/19   | - Global changes (reassignment of duties):                                                                                                                                                                                  |
|      |            |   - &quot;PFTD Operations Officer” changed to “PFTD Manager”.                                                                                                                                                                   |
|      |            |   - &quot;ISSTEC Coordinator” changed to “Assistant Rangemaster”.                                                                                                                                                              |
|      |            |   - &quot;Oversight Programs Director” changed to “Facilities Director&quot;.                                                                                                                                                      |
|      |            | - Item 9.2.1: Changed “forms of communication (e.g., landlines or Verizon cell phones and radios)” to “forms of communication (e.g., landline phones and radios)”.                                                            |
|      |            | - Item 9.2.2: Changed &quot;An emergency use phone is located on the outside of the ISSTEC Building 9825H for off hour and/or weekend emergency use. A lock box next to the phone contains a charged radio for emergency use. The ISSTEC key opens the lock box.&quot; to &quot;An emergency use phone is located on the outside of the Classroom 9825F and Building 9825H for off hour and/or weekend emergency use. A lock box next to the phone on Classroom F contains a charged radio for emergency use. The ISSTEC key opens the lock box.&quot; |</p>
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<tr>
<td>7.2</td>
<td>02/05/19</td>
<td>Updated references to ANSI/ISEA Z87.1-2015, <em>American National Standard for Occupational and Educational Personal Eye and Face Protection Devices.</em></td>
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<td>7.1</td>
<td>10/19/18</td>
<td>Sections 6.0 and 10.12.1: Added “NOTE: Climbing on any fence at the ISSTEC is strictly prohibited.”</td>
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<td>7</td>
<td>05/07/18</td>
<td>Signature block: Changed “Officially Designated Federal Security Authority” to “Officially Designated Security Authority”.</td>
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<td>Items 9.2.2 and 9.2.3: Added to address new emergency use phone.</td>
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<td>Item 9.2.3: The SNL EOC can be reached using radio channel C-1: Deleted.</td>
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<td>Section 11.0, Emergency Procedures:</td>
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<td>- Deleted “NOTE: NTC-PM-504, <em>NTC Emergency Management Plan</em>, details actions to be taken in the event of an emergency at the ISSTEC.”</td>
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<td>- Item 11.1: Added “from a landline phone”.</td>
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<td>- Item 11.2: Added “An emergency use phone is located on the outside of ISSTEC building 9825H for off hour and/or weekend emergency use. A lock box next to the phone contains a charged radio for emergency use. The ISSTEC key opens the lock box.”</td>
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<td>Section 11.2, Emergency Actions: Added.</td>
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<td>Item 11.3.1, “Weather conditions involving long-term periods of dryness can adversely affect ESS activities due to increased fire hazard in Coyote Canyon. This includes the ISSTEC and LFR areas”: Added.</td>
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<td>Item 11.3.2, “LFR Safety Specialist: Post the appropriate Fire Conditions Warning Signs and determine when conditions limit certain types of activities. This determination will be made in conjunction with U.S. Forest Service criteria (see Appendix F for such restrictions)”: Renumbered existing text as 11.3.2.</td>
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<td>Section 12.0, Fire Conditions and Restrictions: Renumbered as 11.3.</td>
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<td>Section 13.0, Appendices: Renumbered as 12.0.</td>
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<td>6</td>
<td>04/10/17</td>
<td>Definitions 5.1, 5.3, 5.4, 5.5, 5.6, 5.9: Revised.</td>
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<td>Definition 5.1, Authorized ISSTEC Instructor: Removed “Controller”.</td>
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<td> </td>
<td>Definition 5.5, Item B: Changed “submachine gun” to “machine gun”.</td>
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<td>Definition 5.7, Non-DOE Responsible Point-of-Contact: Deleted.</td>
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<td>6.0, Policy: Revised.</td>
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<td>Items 7.2.2 and 7.4.15: Added (transferred from Lead Instructor, 7.5.5, to Rangemaster).</td>
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<td>Section 7.5: Deleted “Individual instructors may fulfill various controller duties as described in DOE O 473.3A at various stages throughout the course of the training.” and revised 7.5.6.</td>
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<td>Section 9.6.3: Deleted “The designation of who will fill out the RACR form(s) for any specific event will be determined by the Rangemaster, the PFTD Operations Officer, or the LFR Safety Specialist.”</td>
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<td>Section 10.6.4.1: Changed “smoke and diversionary devices” to “pyrotechnics”.</td>
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<td>Section 10.7.9: Added “noise/flash”.</td>
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<td>Section 10.8.2: Added “kernmantle”.</td>
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<td>Section 10.8.3: Added.</td>
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| &nbsp; | &nbsp;     | Section 10.9.1: Added “unexpended” to “…account for all ammunition…”.

Item 10.8.1: Deleted “Training on the rooftop of ISSTEC building 9825H is prohibited for students and outside users. The northwest and southeast corners, respectively, of the roof on Building 9825H have been approved for rooftop fighting. Only NTC instructors are authorized to engage from these positions. Personnel shall NOT attempt to walk on the roof or roof edges of the building.”
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| 5.4  | 02/22/17   | - Section 2.0: Added note on ESS weapons.  
      |                                                    | - Item 5.5.H: Updated definition and added note.  
      |                                                    |                                                                                                                                                          |
| 5.3  | 12/06/16   | - Section 10.7.5: Changed 15 minutes to 7 minutes for smoke plume exposure without a respirator.  
      |                                                    |                                                                                                                                                          |
| 5.2  | 11/07/16   | - Global change: Updated reference to DOE O 473.3A.  
      |                                                    | - Section 5.1:  
      |                                                    | - Added "(CONTROLLER)"  
      |                                                    | - Revised "Authorized" to "Non-NTC authorized" in "Non-NTC authorized instructors must be listed on an approved RUA".  
      |                                                    | - Item 10.7.9: Added.  
      |                                                    |                                                                                                                                                          |
| 5.1  | 07/21/16   | - Section 7.5.4: Corrected to “…ensures the blue and orange flag…”  
      |                                                    | - Section 9.6: Revised RACR text to match SOP 644, Section 9.12.  
      |                                                    | - Appendix D: Removed "under 10 CFR 851" from the statement “Have the staff, students, and employees been informed of their "stop work" rights under 10 CFR 851?” in response to a corrective action identified as the result of PFTD's assessment approved 05/16/16.  
      |                                                    |                                                                                                                                                          |
| 5    | 04/26/16   | - Total rewrite that combined previous PFT-SOP-643, ISSTEC Operations, and PFT-SOP-646, Engagement Simulation Systems                                                                                   |
      |                                                    | - Revised Section 8.16, Risk Analysis Compliance Review.  
      |                                                    | - Added Section 8.17, Training Aids.  
      |                                                    |                                                                                                                                                          |
| 4    | 06/04/15   | - Reassigned responsibilities (ISSTEC Steering Committee, ISSTEC Area Facility Specialist) to other staff.  
      |                                                    | - Updated to reflect current contractor organization.  
      |                                                    | - Revised 2.0 Scope to include ISSTEC Training RAR.  
      |                                                    | - Revised 3.0 References to include NTC-PM-505.  
      |                                                    | - Revised ISSTEC Users and Visitors responsibilities (7.7.2.A and 7.7.3).  
      |                                                    | - Revised 8.1.4; 8.2; 8.3.2.B, 8.4; 8.5.3.1.1; 8.5.3.3; 8.5.7; 8.13.1; and 8.13.2.  
      |                                                    | - Revised note in 8.14.  
      |                                                    |                                                                                                                                                          |
| 3.1  | 03/07/13   | - Updated Section 8.3.  
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| 3    | 02/28/13 | - Removed Sections 7.1, NTC Director, and 7.5, Armory Operations, from Responsibilities section.  
       |          | - Added text on dual usage of ISSTEC to Section 8.1.  
       |          | - Updated NTC job titles and references.  
       |          | - Added Section 8.5.7, Test Plans, as a corrective action. |
| 2    | 01/07/11 | Annual review/revision approved.                             |
| 1    | 06/29/09 | Annual review/revision approved.                             |
| 0    | 09/27/08 | Original SOP approved.                                      |
1.0 PURPOSE

This standard operating procedure (SOP) assigns responsibilities and establishes the procedures and requirements for the safe operation of the U.S. Department of Energy (DOE) National Training Center (NTC) Integrated Safety and Security Training and Evaluation Complex (ISSTEC). All ISSTEC training will be conducted in accordance with this SOP; DOE Order 473.3A, Protection Program Operations; and approved NTC course lesson plans, exercise plans, and the ISSTEC Training risk analysis report.

2.0 SCOPE

This SOP applies to all individuals that use the ISSTEC facilities, including all Federal and contractor employees, NTC students (regardless of their place of employment), non-DOE agencies, and visitors.

ISSTEC operations include training, demonstrations, rehearsals, testing and evaluations, and dry-run exercises involving engagement simulation systems (ESS) under both day and night conditions.

3.0 CANCELLATION


4.0 REFERENCES

4.1 DOE Standard DOE-STD-1212-2012, Explosives Safety
4.2 DOE Order 473.3A, Protection Program Operations
4.3 ANSI / ISEA Z87.1-2015, American National Standard for Occupational and Educational Personal Eye and Face Protection Devices
4.4 AF 91-201, Explosives Safety Standards
4.5 ESH-PM-505, NTC Worker Safety and Health Program Plan
4.6 ESH-SOP-501, Integrated Safety Management Program
4.7 ESH-GP-531, Risk Analysis
4.8 ESH-GP-536, Shop Operations and General Maintenance
4.9 ESH-GP-549, Storage, Transportation, and Use of Explosives
4.10 ESH-GP-552, Inclement Weather Restrictions
4.11 PFT-SOP-647, Armory Operations
4.12 ISSTEC Training Risk Analysis Report
5.0 DEFINITIONS

5.1 AUTHORIZED ISSTEC INSTRUCTOR. An instructor who has formal training that has been reviewed and approved by the Rangemaster and the PFTD Manager. Non-NTC authorized instructors must be listed on an approved RUA.

5.2 DYE MARKING CARTRIDGE (DMC)–MODIFIED FIREARM. A firearm that has been temporarily modified or designated as a permanent DMC weapon that feeds, fires, and functions DMC ammunition. A firearm modified with the conversion kit reduces the ability to feed and fire lethal ammunition. All NTC firearms and magazines designated for DMC weapon systems are color-coded BLUE.

5.3 ESS ACTIVITY VISITOR. An individual who has authorization to enter the ESS training area solely to observe training activity.

5.4 ESS ACTIVITY PARTICIPANT. An individual who participates in training activities as either a student or role player and, as such, must be trained in ESS use.

5.5 ESS TYPES.

A. MULTIPLE INTEGRATED LASER ENGAGEMENT SYSTEM. Blank-fire systems equipped with laser transmitters that pulse in response to the noise or vibration of a cartridge firing. Participants wear harnesses and head gear equipped with laser sensors that detect and respond to laser energy.

B. DYE MARKING CARTRIDGE (DMC) SYSTEMS. Systems that consist of specially modified duty handguns, machine guns, and rifles using a replacement upper receiver, and non-lethal lightweight hollow plastic projectiles containing a colored, nontoxic marking compound designated to allow for realistic decisional shooting situations during training activities.

C. HYBRID DYE MARKING CARTRIDGE ESS FIREARM. A firearm that has been modified or designated by a DOE-certified gunsmith as a “DMC” weapon that feeds and functions DMC ammunition. The modification reduces the ability for a live round to chamber in the weapon. Additionally, the weapon is mounted with a MILES transmitter. Hybrid firearms are marked both BLUE and ORANGE.

DMC rounds have very limited effective and maximum ranges. Thus, both systems are used typically during limited-scope performance tests (LSPTs) and training activities to simulate close quarters battle (CQB) and decision shooting situations.

D. BLANK FIRE SYSTEM. Blank fire equipment consisting of specially modified duty firearms (that cannot fire live ammunition or projectiles) and blank fire cartridges (loaded with powder but containing no projectile) designed to provide realism during training.

E. INERT WEAPONS SYSTEM. System consisting of simulated firearms and weapons or actual firearms and weapons that have been rendered incapable of firing live or blank fire ammunition.
F. AIRSOFT SYSTEM. Sometimes referred to as soft air system, system that consists of replica duty weapons that propel plastic or biodegradable BBs by means of either rechargeable batteries or Green Gas (HFC 143a).

G. OTHER TYPES OF ESS. Other types of ESS and associated equipment may be used during PF performance testing (PT) and training activities to simulate adversary and PF actions and real world incidents. Pyrotechnics and smoke generators may be deployed to simulate fires and chemical agents. Hand-thrown smoke grenades may be used to cover adversary and PF tactics or to provide diversions. Practice or inert grenade systems can be used to simulate thrown explosives and can be followed by noise/flash diversionary devices, air horns, and other devices to simulate explosions.

H. TRAINING AIDS. Training aids include mock firearms and simulated edged weapons with the appearance and handling characteristics of a real weapon, yet are readily distinguishable from an actual weapon. These mock weapons are comprised of a homogenous material incapable of accepting any form of magazine, feeding device, ammunition, or projectile, and are readily identifiable from a distance or in low-light conditions from live firearms or actual edged weapons. These training aids must be distinctly color-coded for identification purposes

NOTE: Training aids are authorized for use at the LFR but may not be pointed at humans or used for any force-on-force activities.

5.6 LEAD INSTRUCTOR. For the purpose of this SOP, the instructor who is responsible for conducting approved training activities held at the ISSTEC facilities, and ensuring adherence to this SOP during use of the ISSTEC facilities.

5.7 NON-DOE USER. A Federal, state, or local (law enforcement or military) agency that has a current Range Use Agreement (RUA) with the NTC to use the ISSTEC facilities.

5.8 ESS TRAINING AREA. An area where ESS training is permitted. These areas include, but are not limited to, approved areas of No Sweat Blvd., Area 4, and the entire ISSTEC facility. Such training areas are inspected to ensure they are free of live ammunition, unconverted weapons, unmarked magazines, edged or impact weapons and oleo capsicum (OC) weapons (also known as “pepper spray”). In addition, all participants will be searched for the above contraband items prior to entering the training area.

6.0 POLICY

NO LIVE WEAPONS OR AMMUNITION WILL BE PERMITTED ON THE ISSTEC SITE. Live weapons and ammunition must be stored away from the ISSTEC premises in an approved manner according to each user organization’s procedures.

ONLY operational Sandia protective force personnel are permitted to carry live weapons and/or ammunition onto the ISSTEC site (e.g., when performing routine checks of ISSTEC facilities or in the event of an emergency or alarm response). If this should occur during training operations, the Lead Instructor will immediately suspend all training activities, notify the protective force personnel of the activities, secure all ESS weapons and blank ammunition, and allow the protective force personnel to proceed.
It is NTC policy to conduct ESS training in accordance with applicable DOE requirements, this procedure, approved lesson plans, exercise guides, and training plans. NTC ESS activities are conducted for training purposes only and not for actual performance testing as described in DOE O 473.3A. Specific safety briefings must be developed and provided prior to conducting each training activity.

NOTE: Climbing on any fence at the ISSTEC is strictly prohibited.

Any activities conducted outside of the fence line must be coordinated through the Rangemaster.

All work at the NTC will be conducted in accordance with DOE Integrated Safety Management. It is NTC policy to incorporate safety into the planning and execution of all work and to ensure safety from hazards for NTC workers, visitors, and the environment. The NTC will implement appropriate controls for those hazards that cannot be totally removed.

It is NTC policy that all significant safety violations will be reported, documented, and investigated by NTC. Failure to comply could result in the suspension or termination of an organization’s RUA.

Alcoholic beverages and drugs are prohibited on NTC facilities. Students suspected of being under the influence of drugs, alcohol, or medication will be removed from ISSTEC activities until resolved.

Physical security systems testing and evaluation, protective force equipment testing, hazard evaluations will be evaluated on a case-by-case basis and must be approved by the NTC Director or designee.

Photography and videography are prohibited at the ISSTEC facility unless specifically authorized by the NTC Director or designee.

7.0 RESPONSIBILITIES

Although each individual is responsible for their duties listed in this section, these duties may be delegated to another individual who is equally qualified to perform the same function.

All personnel have the authority to call a stop work for unsafe operations being conducted at the ISSTEC facility. Immediate notifications will be made to the Lead Instructor, Rangemaster, PFTD Manager, and the LFR Safety Specialist.

7.1 NTC General Manager

The NTC General Manager is responsible for ensuring that all applicable activities conducted at the ISSTEC are in compliance with the requirements of this SOP.

7.2 Rangemaster

The Rangemaster is responsible for the safe operation of the ISSTEC facility, which involves being knowledgeable of all risk analysis reports relative to the ISSTEC and ESS
operations and adhering to all safety and security requirements. Additional responsibilities include:

7.2.1 Ensures RUAs for all ISSTEC users are current and signed.

7.2.2 Ensures a yellow flag is displayed when access to the facility is limited. ESS activities will be prohibited.

7.2.3 Supervises the Assistant Rangemaster in the following:

A. Delivery of required PFTD equipment and materials and supplies to the ISSTEC.

B. Preparation for training activities outside the ISSTEC that require coordination with the KAFB Controlled Firing Area Committee (CFAC).

C. Reviews written procedures governing ESS operations at the ISSTEC to ensure they are both current and consistent with other NTC internal directives.

D. Ensures all NTC training department instructors are familiar with and in compliance with the procedures outlined in this and referenced SOPs.

E. Reviews and approves modifications to or construction at the ISSTEC facility. Oversees construction projects to ensure work is accomplished in accordance with the statement of work.

F. Ensures required ISSTEC supplies and ammunition are budgeted for, purchased, and stored correctly.

7.2.4 Ensures only authorized personnel use or maintain ISSTEC electrical or mechanical systems (e.g., heating, ventilating, and air-conditioning [HVAC] systems; computer and audiovisual systems; and electrical and plumbing systems).

7.2.5 Issues appropriate keys for ISSTEC use during non-normal hours to approved users.

7.3 **PFTD Manager**

The PFTD Manager is responsible for the safe ESS operations at the ISSTEC facility. Additional responsibilities include:

7.3.1 Reviews written procedures governing ESS operations at the ISSTEC to ensure they are both current and consistent with other NTC internal directives.

7.3.2 Ensures all NTC training department instructors are familiar with and in compliance with the procedures outlined in this and referenced SOPs.
7.4 **Assistant Rangemaster**

The Assistant Rangemaster is responsible for the day-to-day safety and maintenance of the ISSTEC facilities. Specific responsibilities include the following:

7.4.1 Ensures only approved ESS weapons, targets, and supplies are used at the ISSTEC during training.

7.4.2 Ensures all equipment is maintained in safe working order and all required materials are available.

7.4.3 Coordinates with the Rangemaster for required protective force training equipment and materials and supplies when necessary.

7.4.4 Performs periodic inspections of the ISSTEC facility and advises the appropriate staff of necessary maintenance and repair requirements.

7.4.5 Performs monthly inventory of ESS ammunition stored at the ISSTEC.

7.4.6 Conducts an ISSTEC orientation for new instructors and ISSTEC users who have current RUAs.

7.4.7 Ensures all personnel working or training at the ISSTEC receive a safety briefing prior to beginning activities.

7.4.8 Ensures training is provided for maintenance staff on the safe use of equipment used at the ISSTEC.

7.4.9 Monitors radio Channel B4 for notification of non-NTC, offsite emergencies.

7.4.10 Maintains the following ISSTEC documents:

   a. ISSTEC Use Logs (Appendix A)
   b. ISSTEC Pre-Activity Statements, as required
   c. ISSTEC Post-Activity Statements and Reports, as required
   d. Key issue control and key logs
   e. Building 9820 Pre- and Post-Training Walk-Through Form (Appendix K)

7.4.11 Coordinates with the Rangemaster on training activities outside the ISSTEC that require coordination with the KAFB CFAC.

7.4.12 Coordinates delivery of equipment and materials and supplies to the ISSTEC with delivery personnel, the Rangemaster, and the LFR Operations Administrative Assistant.

7.4.13 Enforces ISSTEC vehicle operations and parking requirements.

7.4.14 Completes Risk Analysis Compliance Review forms for ISSTEC activities and submits to the Rangemaster.
7.4.15 Ensures a yellow flag is displayed when access to the facility is limited. ESS activities will be prohibited.

7.4.16 Ensures blue and orange flag is displayed when ESS activities are in progress and access to the facility is prohibited. When visibility is limited by weather conditions or darkness, the flashing blue and orange beacon must be used. The flag will be secured and/or the flashing blue and orange beacon will be turned off at the conclusion of ESS activities.

7.4.17 Issues appropriate keys for ISSTEC use during non-normal hours to approved users.

7.5 Lead Instructor

7.5.1 Ensures no live weapons or ammunition are brought onto the ISSTEC site. Live weapons and ammunition must be stored outside the training area in an approved manner according to each user organization’s procedures.

7.5.2 Inspects all ESS weapons and magazines to ensure they are properly modified and marked for ESS training use.

7.5.3 Signs-in and signs-out on the ISSTEC Use Sign-in/Sign-out Sheet at Building 9825I.

7.5.4 Before any ESS activities can begin at ISSTEC, ensures the blue and orange flag will be raised. When visibility is limited by weather conditions or darkness, the flashing blue and orange beacon must be used. The flag will be secured and/or the flashing blue and orange beacon will be turned off at the conclusion of ESS activities.

7.5.5 Removes the yellow flag only after the Rangemaster or Assistant Rangemaster inspects ISSTEC and authorizes its use.

7.5.6 Appoints qualified instructors who are responsible for implementing and enforcing the following requirements during training activities:

7.5.6.1 Establishes and maintains communications with all instructors throughout the duration of training.

7.5.6.2 Conducts a safety inspection of the training area prior to training, and ensures proper warning signs and flags are posted and lights are used for low-light training. During the safety inspection, identifies and marks hazards, hazardous areas, and off-limits areas.

7.5.6.3 Ensures an activity-specific safety briefing is provided to all participants.

7.5.6.4 Ensures a paramedic is available prior to training and releases them when they are no longer required.

NOTE: NTC training courses may be conducted on a temporary basis without the presence of a paramedic with prior approval from the Rangemaster, PFTD Manager, and with notification to the ES&H Specialist. Approval is based on the presence at the training site of an NTC instructor who is currently trained and certified in first aid, cardiopulmonary resuscitation (CPR), and the handling of gunshot wounds, and is in possession of a medical trauma kit.
7.5.6.5 Ensures emergency vehicles are not delayed when responding to emergencies in the training area.

7.5.6.6 Ensures all NTC ESS weapons conversions are performed by DOE-certified gunsmiths. For non-NTC weapons conversions, DOE-certified gunsmiths will inspect all converted weapons prior to commencement of training. ESS ammunition will be distributed and loaded within the ESS training area.

7.5.6.7 Informs all participants of the requirement to call a “CEASE FIRE” if they observe a safety violation or unsafe condition, and then declares an “exercise freeze” until the situation is safely resolved.

7.5.6.8 Assigns instructors or support personnel to prohibit unauthorized access to the ESS training area to prevent the introduction of lethal firearms, ammunition, unauthorized personnel, or persons without the appropriate personal protective equipment (PPE).

7.5.6.9 Prior to each training operation, briefs participants on the requirements of each scenario and encourages participants to ask questions to ensure their complete understanding of the training to be undertaken.

7.5.6.10 Prior to conducting ESS training, ensures an approved risk analysis report is in effect that identifies all potential hazards associated with the training and the necessary actions to eliminate the hazards or mitigate them to an acceptable level. If no risk analysis report exists, prepares one in accordance with ESH-GP-531, Risk Analysis, and secures the required approvals.

7.5.6.11 If activities to be conducted are not consistent with usual activities conducted at the ISSTEC facility, then the test plan and risk analysis report must be submitted at least 2 weeks in advance to the Rangemaster for review and approval.

7.6 Instructors

7.6.1 Ensure no live ammunition, unconverted or unmarked weapons, unmarked magazines, edged or impact weapons, and chemical agents are allowed into the training area.

7.6.2 Stop training if unsafe conditions arise.

7.6.3 Ensure all students, role players, and visitors are wearing required PPE prior to training.

7.6.4 Ensure all participants adhere to specified training boundaries.

7.6.5 Ensure all personnel entering the ESS training area have been inspected for prohibited items (live fire weapons, live ammunition, edged weapons, impact weapons, aerosols, etc.), and reports these results verbally to the Lead Instructor prior to beginning training.

7.6.6 Prior to the beginning of each scenario, advise the Lead Instructor when their areas are ready.

7.6.7 Ensure all participants in their area comply with rules of engagement and training safety requirements.
7.6.8 Ensure the accountability of participants, visitors, and equipment at the end of training, and report the results to the Lead Instructor.

7.6.9 Declare an “exercise freeze” if safety issues arise, and ensure training does not resume until the issue has been safely resolved.

7.6.10 Inspect all ammunition prior to issue to exercise participants.

7.6.11 Test ESS equipment for operability prior to issue.

7.6.12 Collect all ESS firearms, ammunition, and pyrotechnics at the end of training.

7.6.13 Ensure prohibited articles found during pre-exercise searches are secured outside the ISSTEC facility and designated training area.

7.6.14 Supervise the loading and unloading of all ESS weapons systems.

7.6.15 Supervise the issue and turn-in of ESS equipment and training aids.

7.6.16 Monitor radio Channel A4 while at the ISSTEC.

7.7 Armory Staff

All policies and procedures regarding the operation and use of the ISSTEC armories (Buildings 9825C and 9825J) are detailed in PFT-SOP-647, Armory Operations, and are enforced at the ISSTEC as they apply to ESS.

7.8 ES&H Department

7.8.1 Reviews the risk analysis report before each ESS training course, testing, demonstration, and evaluation of equipment, vehicles, weapon systems and munitions, and technologies to ensure all potential hazards are identified and adequate controls are being implemented. If these criteria have not been met, returns the risk analysis report to the Lead Instructor for revision and provides ES&H guidance on course conduct and maintenance procedures.

7.8.2 Conducts inspections and makes recommendations to ensure compliance with applicable codes, standards, and regulations.

7.8.3 Works with NTC training departments to ensure the risk analysis process is implemented and documented for all training activities conducted at the ISSTEC.

7.8.4 Ensures all subcontractor personnel working at the ISSTEC receive a safety briefing prior to beginning activities.

7.9 ISSTEC Users and Visitors

Lead Instructors are responsible for ensuring that ISSTEC users and visitors comply with this and all other sections of this SOP as appropriate, including cleaning up the facilities after training, and reporting any damage to the Rangemaster or Assistant Rangemaster. Costs to repair damage to equipment or facilities will be reimbursed to the NTC.
7.9.1 Follow the directions posted at the main gate, recognize and adhere to all signage within and around the facility, and observe the requirements associated with flags and beacons.

7.9.2 Upon entry or exit from ISSTEC, all ISSTEC user agency lead instructor and visitors must sign in and out using the ISSTEC Use Log (Appendix A) located in Building 9825I Entry Control Facility. All appropriate information must be entered on the appropriate page.

7.9.3 Complete a general orientation by the Assistant Rangemaster (or Rangemaster or designee). Instructors will conduct course-specific safety briefings prior to training.

7.9.4 Prior to entry—and for re-entry—into the ISSTEC, all persons, vehicles, and equipment will be inspected for live weapons, ammunition, and other prohibited items if ESS training is in progress or pending.

7.9.5 Instructors will ensure all persons entering the ISSTEC are wearing the PPE required for the training to be performed or observed.

7.9.6 ISSTEC training visitors will be escorted and controlled by a designated instructor at all times. Visitors will be searched and cleared prior to their entry into the ISSTEC training area if ESS training is in progress or pending. Visitors will be provided with required PPE and will be confined to designated observation areas for the duration of the ESS training.

7.9.7 Delivery personnel will coordinate all deliveries with the Assistant Rangemaster, Rangemaster, or LFR Operations Administrative Assistant.

8.0 FACILITIES

The ISSTEC is intended to replicate a DOE site. The following list describes the ISSTEC buildings and their function(s):

- Building 9825A: A classroom.
- Building 9825B: ESS weapons cleaning area and maintenance workshop. It is a “No Access – Area Out of Play” building during ESS training.
- Building 9825C: The alarmed storage location for the site’s ESS ammunition. It is a “No Access – Area Out of Play” building during ESS training.
- Building 9825D: A simulated office building or classroom.
- Building 9825E: Indoor restrooms and simulated office building.
- Building 9825F: Main classroom or conference room. It also includes a Central Alarm Station (CAS) and Assistant Rangemaster’s office. It is a “No Access – Area Out of Play” area during ESS training.
- Building 9825G: Classroom or conference room.
• Building 9825H: An ESS close quarter battle simulator. It is intended to replicate a DOE nuclear facility.

• Building 9825I: The Entry Control Point where all personnel and vehicles enter and exit the facility. It is the ESS exercise access area where personnel are sanitized for prohibited articles.

• Building 9825J: The alarmed storage location for ESS weapons. It is a “No Access – Area Out of Play” building during ESS training.

• Building 9825K: A communications building. It is a “No Access – Area Out of Play” building during ESS training.

• Building 9820: An ESS close quarter battle simulator. It is intended to replicate a residential facility.

• Building 9820A: A storage building. It is a “No Access – Area Out of Play” building during ESS training.

9.0 ISSTEC GENERAL PRACTICES

9.1 Vehicle Safety

ISSTEC Users: Comply with the following vehicle safety requirements:

1. Vehicles will be used under the direction of NTC instructors.

2. Operators of vehicles at the ISSTEC must have a valid motor vehicle license.

3. All vehicle occupants must wear personal restraint systems (e.g., seatbelts).

4. Operate vehicles in accordance with all posted traffic signs.

5. Specialty vehicles used at the ISSTEC (e.g., forklifts) will be operated by personnel who have received appropriate training for such vehicles.

6. Vehicles used for ISSTEC activities will be inspected to ensure the vehicle is in proper condition for its intended use including an inspection for prohibited articles.

7. Only authorized government vehicles that are in direct support of the training activities in progress are allowed on the ISSTEC compound during ESS exercises. All other vehicles will be parked in designated areas outside of the exercise play area and will be locked. Exceptions may be authorized by the Rangemaster or Assistant Rangemaster.

8. Students being transported to the ISSTEC must be seated in the vehicles using seat belts and shoulder restraints. Students may not be transported in truck beds.

9. Authorized vehicles in the ISSTEC compound will maintain speeds of 10 mph or less.
10. No one will dismount an exercise vehicle in the ISSTEC until it has come to a complete stop, the transmission is in PARK, the parking brake is set, and the engine is off.

11. All vehicles must be clear of gates before opening or closing gates.

9.2 Communication

9.2.1 Two functional, independent forms of communication (e.g., landline phones and radios) are required during all ESS activities. During ESS activities at the ISSTEC, each NTC instructor uses a radio set to channel A-4.

9.2.2 A phone is located on the outside of the Classroom 9825F and Building 9825H for emergency use. A lock box next to the phone on Classroom F contains a charged radio for emergency use. The ISSTEC key opens the lock box.

A phone is located inside Building 9820 for emergency use.

NOTE: The SNL EOC can be reached using radio channel C-1.

9.2.3 Assistant Rangemaster: Coordinate the placement of the radio in the lock box when off hour and/or weekend use of the ISSTEC has been scheduled with the LFR Operations Administrative Assistant.

9.2.4 When NTC activities are conducted off site, two radios must be set to B-4 (e.g., the off-site Lead Instructor and the LFR Operations Administrative Assistant).

NOTE: Channel B-4 is a trunked radio channel that is used to communicate among activities at various locations outside of the LFR. Channel B-4 will be monitored by the LFR Operations Administrative Assistant, Rangemaster, PFTD Manager, Assistant Rangemaster, or designee(s).

9.3 Personal Protective Equipment

For PPE requirements, see Appendix E.

9.4 Inclement Weather

When weather conditions may negatively impact ISSTEC activities, the activity will be canceled or suspended until it is safe to resume. Guidance found in ESH-GP-552, Inclement Weather Restrictions, will be followed.

9.5 ISSTEC Housekeeping

ISSTEC Users:

1. Pick up expended brass regularly and put it in brass collection containers.

2. Pick up expended cartridges and dispose of in trash receptacles.
3. Secure ammunition boxes, targets, and other materials to prevent them from blowing away or being damaged by wind.

4. Ensure equipment, ranges, munitions storage areas, administrative buildings, and classrooms are secured and sealed upon completion of activities.

5. Ensure classrooms are left clean, organized, and returned to their original configuration; empty all trash and put in new liners; and sweep and mop floors as needed.

6. Report any item needing repair to the Assistant Rangemaster, Rangemaster, or PFTD Manager.

**NOTE:** Personnel and equipment are not permitted on the berm east of 9825H, except for maintenance activities.

### 9.6 Risk Analysis Compliance Reviews

9.6.1 Risk Analysis Compliance Review documents (RACRs; see Appendix D) are used to document risk analysis compliance for NTC classes conducted at the LFR and ISSTEC. The Rangemaster will maintain the master file for all completed RACRs.

9.6.2 RACRs may be completed by the following personnel:

1. LFR Safety Specialist
2. Rangemaster
3. Authorized designee.

9.6.3 A RACR will be completed daily and submitted to the Rangemaster for every user of the ISSTEC by the close of each business week. For all users of the ISSTEC (including conducting ESS training, maintenance, construction, or any other activity), activities will be observed and this form will be submitted.

9.6.4 Once completed, the RACR will be forwarded to the Rangemaster for review and approval. All completed forms will be maintained per current DOE and NTC records management requirements.

9.6.5 The Rangemaster will provide a copy of all RACRs, sign-in logs, and a copy of the LFR scheduling report for review by the General Manager.

### 9.7 Test Plans

9.7.1 A test plan and a risk analysis report must be developed for all activities conducted at ISSTEC, including testing, demonstration, and evaluation of equipment, vehicles, weapon systems and munitions, and technologies, and submitted to the Rangemaster a minimum of 2 weeks in advance.

9.7.2 Test plans must include:

   a. Purpose,
   b. Roles and responsibilities,
c. Methodology,
d. Schedule,
e. Facilities to be used,
f. Equipment, vehicles, weapons and ammunition, and technologies,
g. A copy of the safety briefing that must precede the test.

9.7.3 The Rangemaster will ensure these individuals are notified when he receives a request for evaluation or test. The following signatures are required on the cover page of each test plan:

- Submitted by: Originator
- Reviewed by:
  - Rangemaster
  - PFTD Manager
  - Facilities Director
  - General Manager
- Approved By: NTC Director

9.8 Pre-Course Setup

**NOTE:** No permanent or semi-permanent modifications may be made to the ISSTEC configuration without the prior approval of the Rangemaster or Assistant Rangemaster and the Facilities Director. All suggestions for modifications will be submitted to the Rangemaster through the Assistant Rangemaster for consideration.

A. **Props.** During training activities, props must be used as designed and as designated for the training being conducted. Props not associated with specified training may not be used without prior approval.

B. **Portable Walls.** When the building configuration requires the use of portable walls, ensure the tops and bottoms of the walls are secured.

C. **Roll-up Door.** The use of the roll-up door on the second floor of 9825H is limited to NTC instructors and maintenance personnel.

D. **PIDAS.** The Assistant Rangemaster will activate the PIDAS to support training or maintenance requirements and will shut it down at the completion of training.

10.0 ISSTEC GENERAL OPERATIONS

10.1 RUA Requirements

The RUA template is available on the NTC website.

1. **ISSTEC Users:** Prior to performing any activities at the ISSTEC, submit a completed RUA to the NTC Director and obtain approval. The RUA will be signed by a senior official of the requesting agency and will constitute an agreement to follow all requirements found in this SOP and other applicable documents.
2. **LFR Operations Administrative Assistant:** Maintain a list of approved RUAs.

### 10.2 ISSTEC Scheduling

1. **ISSTEC Users:** Complete the electronic scheduling form on the NTC website or contact the LFR Operations Administrative Assistant via email.

2. **LFR Operations Administrative Assistant:** Identify scheduling conflicts initially and, if necessary, forward the conflict to the Rangemaster or PFTD Manager for resolution.

### 10.3 ISSTEC Briefing

**All Instructors:** Complete the annual ISSTEC briefing prior to using the ISSTEC. This briefing will include:

1. Applicable NTC SOPs
2. ISSTEC Capabilities
3. ISSTEC Scheduling
4. ISSTEC Sign-in/Sign-out Logs
5. ESS Safety Responsibilities
6. Emergency Medical Personnel Certifications
7. Key and Gate Procedures
8. Vehicle Safety
9. Acceptable ESS Weapons and Ammunition
10. Lighting systems
11. Use of ISSTEC flag or beacon
12. ISSTEC Security
13. Emergency procedures
14. Every participant has Stop Work authority.

### 10.4 ISSTEC Keys

During normal duty hours (0730–1630), the main gate is open.

**10.4.1 NTC Rangemaster or Assistant Rangemaster:** Issue appropriate keys for ISSTEC use during non-normal hours to approved users.

**10.4.2 ISSTEC Users:**

1. Ensure exercise security is maintained during normal duty hours by closing the main gate upon entering the ISSTEC site.

2. Return ISSTEC keys to the LFR Operations Administrative Assistant, Assistant Rangemaster, or Rangemaster within 2 working days or left in the key drop box located inside the main gate.
10.5 ESS Ammunition

10.5.1 ISSTEC Users:

1. Conduct ammunition and explosive storage, handling, and transportation in accordance with DOE-STD-1212-2012, Explosives Safety, or AFM 91-201, Explosives Safety Standards (whichever is more stringent) and ESH-GP-549.

2. Ensure ammunition is kept in factory containers or magazines. When magazines are unloaded, return ammunition to the appropriate factory container. Any partially filled container will be marked to indicate the number of rounds remaining.

3. Ensure all ammunition is handled in a safe manner consistent with this SOP and ESH-GP-549.

10.5.2 Lead Instructor: At the end of each training day:

1. Collect and return all unused pyrotechnics to LFR Bunker #1.
   
a. Complete the NTC Temporary Ammunition Storage Log located in LFR Bunker #1.

   b. Secure the bunker, affix the seal, provide Sandia Security with the seal number, and request the ammunition bunker’s alarm be set.

2. Collect and return all unused ammunition to 9825C.

10.6 Pyrotechnics

10.6.1 Pyrotechnics will only be deployed by those who are trained in their use.

10.6.2 Smoke grenades will be limited to white smoke Combined Tactical Systems (CTS) Models 6210 or 8210.

10.6.3 Only CTS Noise Flash Diversionary Devices (NFDD) Models 7290 or 7290T are authorized at the ISSTEC.

10.6.4 Pyrotechnics will only be deployed outside in bang cans or hard, clear surfaces by hand or Remote Flashbang Detonator. No smoke will be deployed in any building at the ISSTEC facility. Inside Buildings 9825H and 9820, only NFDD 7290Ts are authorized to be used.

10.6.5 Respiratory protection for the use of smoke grenades will not be required as long as individuals are not immersed in high-density smoke plumes (within 15 feet of a grenade). If the activity requires participants to remain within the plume for 7 minutes or longer, they must wear a respirator or move out of the plume as soon as possible. Instructors should make every attempt to minimize exposure to themselves and their students.

10.6.6 Skin contact with smoke combustion products will be minimized by wearing clothing that covers arms and legs and by wearing gloves.
10.6.7 Expended pyrotechnics will be handled using gloves. Duds will only be handled by trained, qualified instructors.

10.6.8 Instructors:

1. Ensure pyrotechnics do not start fires. Combustibles will be removed from the immediate area, and fire extinguishers will be available in areas where smoke grenades are being deployed.

2. Report expended noise/flash diversionary device serial numbers to the Rangemaster at the completion of each course.

10.7 Elevated Surfaces

10.7.1 The ISSTEC has personal restraints for instructors/staff working the climbing wall in the high bay of Building 9825H. The personal restraint system consists of a length of 11-millimeter kernmantle climbing rope or 1-inch tubular nylon with an eye tied in each end. A figure 8 knot is used on the rope, and a water knot is used on the tubular nylon. A locking carabiner is secured in the eye, and one end is secured to the welded tie-down on the wall opposite the roll-up door opening. The other end of the personal restraint is secured through the rear of instructor’s rappel belt. The rappel belt must be located through all instructors’ pant loops, and the tail of the belt must be looped through the locking buckle and secured with Velcro or other device.

10.7.2 Prior to any personnel conducting observation activities, approval must be granted by the Rangemaster, Assistant Rangemaster, or PFTD Manager.

10.8 Weapons Loading and Unloading

10.8.1 All ESS ammunition will be verified by both instructor and student that it is indeed ESS ammunition correct for the weapons system(s) to be used. The Lead Instructor or designee will issue ESS ammunition to students and also account for all unexpended ammunition at the end of the training day.

10.8.2 Loading of all weapons systems will be conducted at the discretion of the Lead Instructor or designee. Loading of weapons will be consistent with safe weapons handling procedures.

10.8.3 Instructors will ensure all unloading is conducted in accordance with safe weapons handling procedures. All weapons will be verified safe and clear by an instructor.

10.8.4 Instructor will ensure weapons used for dry-fire demonstrations at the ISSTEC will be unloaded and independently verified as safe and clear prior to use.

10.8.5 The Lead Instructor or designee will ensure instructors have weapons, holsters, radios, and other equipment that are safe and serviceable for use.
10.9 Exchanging of Firearms

10.9.1 ISSTEC Users: Never give a firearm to, or take a firearm from, any person unless directed by an instructor. The weapon must be in a safe condition: safety on if applicable, ammunition and/or magazine removed, action open, and chambers clear.

10.9.2 Instructor: Prior to the exchange, verify the action is open, the chamber is empty, and the safety is on, if applicable.

10.10 Brass

ISSTEC Users:

NOTE: Do not put unfired ESS ammunition in ISSTEC trash cans.

10.10.1 Place brass in designated containers.

10.10.2 Do not mix brass and expended blank or DMC ammunition.

10.10.3 Do not use hats or pockets to carry brass.

10.11 Breaching

10.11.1 The only breaching allowed at the ISSTEC is fence-cutting using pliers or bolt-cutters in designated areas.

NOTE: Climbing on any fence at the ISSTEC is strictly prohibited.

10.11.2 Ballistic and explosive breaching will be simulated using permanently modified ESS shotguns or NFDDs, respectively.

10.12 Weapons Cleaning Room

NOTE: Absolutely NO ESS ammunition will be allowed in the weapon cleaning rooms.

10.12.1 Lead Instructor (or Designee):

1. Inspect weapons at the clearing barrel prior to entering weapon cleaning rooms to ensure no ESS ammunition is present.

2. Ensure the students are familiar with weapon cleaning procedures and use of the facility.

3. Inspect the cleaning rooms for cleanliness, secure cleaning supplies, and secure the cleaning rooms at the end of each day.

4. Only authorized cleaning materials, including solvents, chemicals, and lubricants, are allowed in the cleaning rooms. No outside materials may be introduced into the cleaning rooms.
10.12.2 **ISSTEC Cleaning Room Users:**

1. Dispose of patches, towels, and other cleaning materials used for weapons cleaning in appropriately marked containers. Do not dispose of liquids in these containers.

2. Wear eye protection in the cleaning rooms when cleaning weapons using solvent and compressed air.

3. Wear protective gloves or barrier cream, which will be provided, for hand protection.

10.13 **Weapons Ammunition and Malfunctions**

In the event of misfires, hang fires, squib loads, and damaged ammunition, instructors will immediately call “CEASE FIRE” and conduct testing and evaluating activities until the problem is corrected. Instructors will properly dispose of damaged or dud ammunition.

10.14 **Render Safe Actions for Diversionary Devices (CTS Model 7290)**

1. Allow the device to sit at least 30 minutes.

2. Use a long handled shovel to place the device in a large open plastic container or a flashbang barrel wearing fire-resistant gloves, long-sleeved shirt, and proper eye and hearing protection. Move the container to a safe place where it will not be disturbed.

3. Notify the Rangemaster of the location of the container.

4. The Rangemaster (or designee) will take the container to either the LFR 7-Position Range or the Vehicle Assault Range, remove the device from the container and destroy it by shooting it with a .223 caliber (or larger) bullet to the center of the body.

10.15 **Damaged Rifle and Handgun Ammunition**

10.15.1 When policing brass, retrieve any damaged ammunition and put it in the “Bad Ammo” can.

10.15.2 Assistant Rangemaster will empty the “Bad Ammo” cans and transfer the contents to Bunker # 4 in the LFR Ammunition Storage Area.

11.0 **EMERGENCY PROCEDURES**

11.1 **Reporting Emergencies**

11.1.1 Report emergencies at the ISSTEC by dialing **911** (SNL Emergency Operations Center) from a landline phone.

**NOTE:** If using a cell phone, dial 844-0911. An additional means of reaching the SNL EOC is radio channel C-1.
11.1.2 A phone is located on the outside of Classroom 9825F and Building 9825H for emergency use. A lock box next to the phone on Classroom F contains a charged radio for emergency use. The ISSTEC key opens the lock box.

A phone is also located inside Building 9820 for emergency use.

11.1.3 When making the call, individuals should be prepared to state:

1. The nature of the emergency (e.g., fire or medical)
2. The building number or location where emergency responders are needed
3. Their name and the phone number from where they are calling

The following NTC staff should also be informed of emergency situations as appropriate and as soon as possible:

<table>
<thead>
<tr>
<th>Employee</th>
<th>NTC #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rangemaster</td>
<td>845-2326</td>
</tr>
<tr>
<td>Assistant Rangemaster</td>
<td>845-2136</td>
</tr>
<tr>
<td>PFTD Manager</td>
<td>845-2321</td>
</tr>
<tr>
<td>LFR Safety Specialist</td>
<td>845-2330</td>
</tr>
<tr>
<td>ES&amp;H Specialist</td>
<td>845-2058</td>
</tr>
<tr>
<td>Facilities Manager</td>
<td>845-2067</td>
</tr>
<tr>
<td>General Manager</td>
<td>845-4804</td>
</tr>
<tr>
<td>Federal Oversight, Facilities/Infrastructure and S&amp;S Training</td>
<td>845-6359</td>
</tr>
<tr>
<td>NTC Director</td>
<td>845-6444</td>
</tr>
</tbody>
</table>

**NOTE:** During non-operational hours, phone calls should be made to at least one of the above listed representatives. The phone numbers are located in the ISSTEC entrance (9825I), 9825H, 9825F, and 9820.

11.2 Actions to Take in Response to Significant Events

Individuals involved in a significant event should immediately take appropriate emergency actions to preserve the safety and well-being of the individuals and equipment involved in the event.

A. NTC employees are responsible for reporting all details associated with the significant event and complying with all investigative measures.

B. Outside users will notify the NTC Rangemaster or PFTD Manager as soon as possible.


**NON-PROPRIETARY INFORMATION**

This SOP was prepared by the Protective Force Training Department and is scheduled for annual review in December 2020.
11.3 Fire Conditions and Restrictions

11.3.1 Weather conditions involving long-term periods of dryness can adversely affect ESS activities due to increased fire hazard in Coyote Canyon. This includes the ISSTEC and LFR areas.

11.3.2 LFR Safety Specialist: Post the appropriate Fire Conditions Warning Signs and determine when conditions limit certain types of activities. This determination will be made in conjunction with U.S. Forest Service criteria (see Appendix F for such restrictions).

12.0 APPENDICES

A – Sample ISSTEC Use Log
B – ISSTEC Site Layout and Floor Plans
C – Access and Use of 9825H Glove Box Room
D – NTC Risk Analysis Compliance Review
E – ESS Safety
F – U.S. Forest Service Fire Condition Warning Signs and Restrictions
G – Marking Systems Activities
H – Rules of Engagement
I – ESS Training Plan
J – ESS Safety Briefing
K – Building 9820 Pre- and Post-Training Walk-Through Form
# APPENDIX A – ISSTEC USE LOG

<table>
<thead>
<tr>
<th>Date</th>
<th>Time In</th>
<th>Time Out</th>
<th>Organization</th>
<th>Representative Name</th>
<th>Personnel Information</th>
<th>Purpose of Visit / Facilities Being Used</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>Lead Instructor</td>
<td>Medic**</td>
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<td>Lead Instructor</td>
<td>Medic**</td>
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</table>

**Medical personnel must be a Paramedic or CPR/first aid certified.
APPENDIX B – ISSTEC SITE LAYOUT AND FLOOR PLANS

Figure B-1. ISSTEC General Site Layout
Figure B-2. Floor Plan for Building 9825I, Simulated Entry Control Facility
Figure B-3. Floor Plan for Building 9825H, Special Projects Building, 1st Floor
Figure B-4. Floor Plan for Building 9825H, Special Projects Building, 2nd Floor
Figure B-5. Floor Plan for Building 9820
APPENDIX C – ACCESS AND USE OF 9825H GLOVE BOX ROOM

C.1 Purpose/Scope

This appendix provides specific policy and requirements for using the Glove Box (GB) Room within Building 9825H. The installation of specialized equipment specifically associated with training by the Safety Training Department requires that specific measures be taken to ensure activities in the area are conducted in a manner that reduces the chances of equipment damage. All other ISSTEC policies and procedures apply.

C.2 Responsibilities

C.2.1 Assistant Rangemaster

The Assistant Rangemaster or designee is responsible for implementing the provisions described herein for facilitating access to the GB Room.

C.2.2 NTC Staff

Any NTC staff member requiring access to or use of the GB Room is responsible for notifying the Assistant Rangemaster or designee in advance and for complying in full with the policies and requirements described below.

C.3 Glove Box Room

The GB Room is reserved for the Safety Training Department or tours approved by the Rangemaster or PFTD Manager.
## APPENDIX D – NTC RISK ANALYSIS COMPLIANCE REVIEW

<table>
<thead>
<tr>
<th>Name of Class/Process:</th>
<th>Date of Review:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Lead Instructor/Supervisor:</td>
<td>Location of Review:</td>
</tr>
<tr>
<td>Name of Reviewer:</td>
<td>Activity Being Reviewed:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Review Points</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are course/process documents complete, current, and present?</td>
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<td>Is activity being conducted with correct personnel or student/instructor ratios?</td>
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<td>Are personnel wearing the correct PPE for the activity?</td>
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<td>Is activity being conducted in due consideration of the current weather?</td>
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<td>Is required communication present and in working order?</td>
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<tr>
<td>Was a safety brief specific to the activity given?</td>
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<tr>
<td>Is required specialized safety equipment present? (bang cans, fire extinguishers, etc.)</td>
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<tr>
<td>Is the activity being conducted/Performed as per the lesson plan/work plan?</td>
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<tr>
<td>Is the appropriate medical personnel available for the activity being performed?</td>
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<tr>
<td>Have the staff, students, and employees been informed of their &quot;stop work&quot; rights?</td>
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</tr>
</tbody>
</table>
APPENDIX E – ESS SAFETY

E.1 Participant Responsibilities

The following paragraphs specifically address safety-related considerations that impact exercise personnel and/or equipment; however, they apply to all ESS activities. Personnel acting as adversaries and response force members must be briefed as to their individual responsibilities to include:

1. Avoiding out-of-play areas
2. Monitoring their own physical condition for signs of overexertion
3. Watching for other participants who appear injured or otherwise are in need of assistance, and immediately ceasing ESS activities in order to render aid and notify an Instructor
4. Reporting injuries, regardless of severity, to the nearest Instructor or safety representative
5. Handling and using all ESS firearms and weapons safely as though they were live fire weapons
6. Inspecting issued MILES weapons and blank ammunition to ensure no live ammunition and the proper blank ammunition is present, and that the MILES weapons and magazines, where used, are properly color-coded
7. Inspecting issued DMC firearms and DMC ammunition to ensure no live or blank-fire ammunition is present, and that the DMC firearms and magazines, where used, are properly color-coded
8. Approved color coding markings are the following:
   - Orange for MILES and blank-fire firearms and magazines, and belts (first link)
   - Blue for DMC firearms and DMC magazines, and belts (first link)
   - Blue and orange for MILES and DMC hybrid firearms
   - Red or blue for inert firearms and weapons
9. Limiting physical contact, during an arrest scenario, to that force necessary for searching and handcuffing while refraining from violent physical contact
10. Never attempting to disarm a participant by grabbing their firearm or person
11. Ascending or descending from elevated positions by ladder, stairs, or using approved urban ascent/descent techniques
12. Avoiding hot propellant gases vented from weapons systems
13. All injuries must be reported immediately to the nearest instructor. Anyone observing an injured or ill participant must immediately advise the nearest instructor.

14. Any damage to vehicles and equipment must be reported to an instructor no later than the termination of the PT.

E.2 ESS Safety

1. All firearms and weapons used in ESS exercises and training activities must be permanently modified and dedicated for ESS use only.

2. All MILES firearms must be equipped with live-round inhibiting devices or ported chambers, plus one or more engineered controls of safety, to prevent the accidental introduction of live rounds.

3. Only DMC firearms equipped with DMC conversion kits and DMC ammunition approved by AU may be used. All DMC conversion kits must be designed to inhibit live rounds from being chambered. DMC systems may be fired only at participants who are at least 1 meter away.

4. ESS firearms must not be loaded until authorized by an Instructor.

5. Blank ammunition must only be fired in ESS equipment.

6. MILES firearms equipped with blank fire adapters or blast deflectors may be fired only at participants who are at least 10 feet away.

7. Maintenance and adjustments to laser transmitters must be performed only by the supplier or by qualified technicians approved by the supplier.

8. ESS firearms must be cleaned after each exercise, and, if malfunctioning or damaged, repaired or removed from service.

9. All ESS firearms must be inspected by a DOE-certified gunsmith and certified at least every 12 months. All engineered safety controls incorporated in an ESS weapon also must be inspected.

10. LAWs/Rocket Propelled Grenades (RPGs), VIPERS.
   a. LAWs/RPGs/VIPERS must not be cocked until the target is identified. If the simulator is not fired at a given target but will probably be fired at another target during the exercise, it must be uncocked again until the target is sighted. If the simulator is not fired, it must be unloaded with the tube empty prior to turn-in.
   b. LAWs/RPGs/VIPERS must be used only in designated areas.
   c. LAWs/RPGs/VIPERS must be used only for training purposes when exclusion distances and conditions are established as though an actual LAW was being fired. The exclusion distance for the LAW/RPG/VIPER is 5 feet to either side and 30 feet to the rear.
APPENDIX F – U.S. FOREST SERVICE
FIRE CONDITION WARNING SIGNS AND RESTRICTIONS

It is Kirtland Air Force Base (KAFB) policy to be one level above the Cibola National Forest Fire Danger Rating.

**KAFB will never be at a low Fire Danger Rating.**

Ascertain the current fire and weather conditions prior to conducting activities in Coyote Canyon and, in particular, note if a “Red Flag Warning” is in effect for Albuquerque through the National Oceanic and Atmospheric Administration (NOAA) website. Activities outside the confines of the Live Fire Range (LFR) will be terminated or suspended if a “Red Flag Warning” condition is in effect.

The Fire Danger Classes listed below provide specific guidance relative to conditions and restrictions.

### MODERATE (blue background with white lettering) and HIGH (yellow background and black lettering)

Restricts fires (open flame) and smoking to developed test sites. Use of pyrotechnics or blank ammunition will be permitted on the developed test sites in approved sandbagged or pitted areas and on the blacktop of “No Sweat Boulevard”. Vehicles are restricted to paved or dirt roads or low-grass areas.

**Additional guidance:**

- Normal activities involving the use of small arms ammunition within the NTC LFR are permitted. No tracer ammunition is allowed.
- Use of flares is prohibited.
- Pyrotechnics are only authorized for use at the LFR R&D Range. Smoke grenades will be limited to white smoke Combined Tactical Systems (CTS) Models 6210 or 8210 and NFDDs Model 7290.
- Pyrotechnics will only be deployed in the LFSHs or outside in bang cans or hard surfaces clear of combustible material. Deviations must be approved by the Rangemaster or PFTD Manager.
- Only designated instructors will deploy pyrotechnics in the above-mentioned approved areas under this fire danger classification.
- Fire extinguishers and water pack extinguishers will be readily available.
- Off-road vehicle traffic should be minimized and limited to established roads and paths or low-grass areas.
VERY HIGH (orange background with black lettering)

Restricts fires (open flames), smoking, and pyrotechnics. Smoking is permitted in non-government vehicles or approved smoking areas only. Use of pyrotechnics is permitted only in approved sandbagged or pitted areas; vehicles are restricted to paved or graded roads. “Burn Site” testing that emits embers with sufficient thermal capacity to start a fire outside of the cleared facility area is not allowed. Welding operations are restricted to areas cleared of weeds and other materials capable of burning to 35 feet.

Additional guidance:

- Normal activities involving the use of small arms ammunition within the NTC LFR are permitted. Rounds must be contained within the confines of the range berms. No tracer ammunition is allowed.
- Use of flares is prohibited.
- Pyrotechnics are only authorized for use at the LFR R&D Range and inside the perimeter fence at the NTC’s Integrated Safety and Security Training and Evaluation Complex (ISSTEC). Smoke grenades will be limited to white smoke Combined Tactical Systems (CTS) Models 6210 or 8210 and NFDDs Model 7290.
- Pyrotechnics will only be deployed at the LFR R&D Range and inside the perimeter fence at the ISSTEC. Pyrotechnics used outside will be exploded in bang cans or on hard surfaces clear of combustible material. Deviations must be approved by the Rangemaster or PFTD Manager.
- Only designated instructors will deploy pyrotechnics in the above mentioned approved areas under this fire danger classification.
- Fire extinguishers and water pack extinguishers will be readily available.
- Off-road vehicle traffic should be minimized and limited to established roads and paths or low-grass areas.
EXTREME (red background with white lettering)

Restricts fires (open flames) and pyrotechnics. Use of pyrotechnics will be approved on a case-by-case basis to meet critical mission requirements. Smoking is allowed only inside non-government vehicles. **No outside smoking is allowed in the remote Research and Development areas.** "No Sweat Boulevard" is off limits to all individuals, even if pyrotechnics are not being used. Suspend non-essential testing operations. Welding operations are restricted to indoor areas or areas that have been shielded by partitions or welding drapes.

Additional guidance:

- Normal activities involving the use of small arms ammunition within the NTC LFR is permitted. Rounds must be contained within the confines of the range berms. No tracer ammunition is allowed.
- Use of flares is prohibited.
- Pyrotechnics are only authorized for use at the LFR R&D Range and inside the perimeter fence at the NTC’s ISSTEC. Smoke grenades will be limited to white smoke CTS Models 6210 or 8210 and NFDDs Model 7290.
- Pyrotechnics will only be deployed at the LFR R&D Range and inside the perimeter fence at the ISSTEC. Pyrotechnics used outside will be exploded in bang cans or on hard surfaces clear of combustible material. Deviations must be approved by the Rangemaster or PFTD Manager.
- Only designated instructors will deploy pyrotechnics in approved areas under this fire danger classification.
- Fire extinguishers and water pack extinguishers will be readily available.
- Off-road vehicle traffic should be minimized and limited to established roads and paths or low-grass areas.

**NOTE:** The Sandia Site Office will evaluate use of “No Sweat Boulevard” on a case-by-case, activity-specific basis. Contact the Environmental Office at 845-5542 and the 377th ABW Fire Marshall (or delegate). Both have the authority to supersede restrictions.
APPENDIX G – MARKING SYSTEMS ACTIVITIES

G.1 General Requirements

1. All DMC exercises must be monitored by a certified Firearms Instructor or has received specialized training that is approved by the Rangemaster or the PFTD Manager.

2. A sufficient number of instructors must participate to ensure adequate control of the training activities.

G.2 Safety Considerations

In addition to the safety considerations described in Appendix E, the following safety considerations specific to DMC activities must be included in training activities which use DMC.

1. All DMC PPE must be visually inspected prior to each use.

2. DMC systems must not be fired at personnel closer than 1 meter.

G.3 Personal Safety Requirements for Force-on-Force Type Activities

1. Hearing protection is required.

2. Clothing such as BDUs is required to cover and protect any exposed skin.

3. For DMC training, eye protection meeting the requirements of ANSI Z87.1-2015, with side protection when training

4. For DMC training, the following is required:
   - Full face, head, and neck protection
   - Gloves
   - Groin protection
   - If body armor is used, it must be dedicated for DMC use only.

G.4 Force-on-Target Training

Training may be conducted using DMC systems to fire at training targets such as the DOE TQ-15, decisional targets, or other targets. Such training does not involve force-on-force. PPE for force-on-target training only requires safety glasses and hearing protection.
APPENDIX H – RULES OF ENGAGEMENT

H.1 Halting an Engagement Simulation Systems Activity

ESS training activities may be halted at any time for safety, emergency, real-time security events, or administrative reasons.

(1) Exercise Freeze. A command that is used to halt an exercise when it is necessary to correct safety-related problems or respond to an emergency.

(a) Any person observing a safety problem must announce an “exercise freeze.”

(b) Instructors must relay the “exercise freeze” announcement throughout the training area.

(c) Every participant must immediately freeze in place (stop at their locations and cease fire, movement, communication, and any other action) until the command “Resume exercise!” is given by the Lead Instructor.

(2) Administrative Hold. An “administrative-hold” is used to halt an ESS training activity when it is necessary to correct problems of an administrative or procedural nature. The use of the command may be planned when it is necessary to put a temporary hold on activities to set the stage for continuation of the training.

(a) The effect of an “administrative hold” can be limited to a specific location(s) or activity.

(b) The command “administrative hold” must not be called to correct safety problems or respond to emergencies.

(c) Only an instructor can declare an “administrative hold” halt training activities. The instructor will announce the hold in the affected area and all participant activity in that area will immediately halt until the instructor gives the command to continue.

H.2 Danger Close or Close Kill

A 10-foot rule applies during any ESS training activities using MILES equipment. This means that if a participant hears either term (“Danger Close” or “Close Kill”), the participant is too close to fire their weapon at another individual. The instructor will make the call as to who is eliminated from the activity and who may continue participating in the scenario.
APPENDIX I – ESS TRAINING PLAN SAMPLE

I.1 Objectives

The ESS training plan objective(s) must be stated succinctly. This will consist of a concise statement of the goal(s), such as to evaluate against established requirements, to enhance preparedness through training, and/or to evaluate potential upgrades to systems or equipment.

I.2 Scenario Description

a. Describe the Threat Scenario: Define the target and the threat to provide an understanding of the nature of the training.

b. Describe the Facilities Involved. Establish the exercise boundaries and provide clear indication of the training area, the facilities involved, and out-of-play areas.

c. Define the Required PF Response. Provide a description of the desired PF response to adversarial actions. This may entail citing the applicable existing response plan or a standing operating procedure. Specific information may be classified.

d. Establish the Schedule. Define training initiation, time and date, and schedule of events.
APPENDIX J – ESS SAFETY BRIEFING

Four General Firearms Safety Rules

Although the Four General Firearms Safety Rules are directed toward live-fire training, it is NTC policy to apply them also to ESS training in order to ensure the safety of participants.

1. All firearms are always loaded.
2. Never point a firearm at anything you are not willing to destroy.
3. Keep your finger off the trigger until your sights are on the target.
4. Be sure of your target.

1. Only students who have received ESS training and have received the safety briefing can participate in training involving ESS weapons.
2. ESS weapons will be issued in a predesignated sanitized area only.
3. All participants and equipment will be inspected by instructors for any live ammunition or weapons prior to entering the sanitized issue area.
4. Each participant must monitor their own physical condition for signs of overexertion.
5. Ascends or descends from elevated positions by ladder, stairs, or using approved urban ascent/descent techniques.
6. Only authorized personnel are allowed on the designated rooftop observation platform of 9825H.
7. All personal protection equipment must be worn when required.
8. All injuries—no matter how slight—must be reported immediately.
9. All posted signs and barriers must be obeyed.
10. No live weapons or ammunition can be mixed with ESS equipment.
11. Each person will visually inspect their magazines and ammunition to ensure no live rounds are present.
12. No MILES firearm will be fired at another player within 10 feet. No DMC will be fired at another player within 3 feet. Participants must be cautious of hot gases vented from ESS weapons.
13. Two types of laser transmitters are used as part of the MILES gear. Transmitters are labeled as Class 1 or 3a depending on the laser power level. When using Class 1 transmitters, do not look directly into the beam any closer than 3 meters with the naked eye or less than 20 meters through an optical instrument. Class 3a distances are 10 meters with the naked eye and NO distance is allowed with an optical instrument.
14. Training with MILES gear requires eye protection and hearing protection.
15. If an encounter occurs within 10 feet with MILES or within 3 feet with DMC weapons, the participants will announce “danger close” or “close kill” and the instructor will declare a “kill.”

16. Participants will not stare directly into the beam of the laser on MILES equipment.

17. Use of physical force, hand-to-hand combat, etc., will not be allowed. Players taken out of play will sit down in place, and place all weapons on safe, on the ground and point them in a safe direction.

18. Anyone witnessing an unsafe act or condition must call out “CEASE FIRE!” Activities will not resume until the situation has been resolved.

19. In the event of an actual medical emergency, an announcement will be made of an “EXERCISE FREEZE.” The Lead Instructor will suspend all activities, and ISSTEC emergency procedures will be initiated.

20. If vehicles are used in training, all drivers must observe the following:
   A. Obey laws related to vehicle operations
   B. All vehicles used for ESS training must be cleared of live firearms and ammunition and other prohibited articles prior to use.
   C. Observe posted speed limits during the exercise and must not exceed either 10 miles per hour in the controlled exercise area or a lower speed limit set by the Lead Instructor.
   D. Ensure all vehicle occupants wear personal restraints, which are mandatory.
   E. Not operate vehicle off roadways unless necessary for the exercise and with approval from instructors.
   F. Prohibit individuals from riding on the outside of the vehicle.
   G. Report any damage to vehicles and equipment to instructors immediately.
   H. Prohibit mounting or dismounting the vehicle until it has come to a full stop with the transmission in park and the parking brake set.
APPENDIX K – BUILDING 9820 PRE- AND POST-TRAINING WALK-THROUGH FORM

Organization: ____________________________________________________________

NOTE: Damage to moveable walls or partitions must be indicated on the provided diagram.
Comments: ______________________________________________________________
______________________________________________________________

Prior to training in the NTC building 9820, the user shall perform a walk-through inspection of the facility and identify all damages.

LFSH INSPECTION

1. Walls (loose panels, clean of DMC input)
2. Doors (on hinges, open & closing properly)
3. Floors (water, snow, ice, debris)
4. Elevated Observation Control Platform (EOCP – catwalk)
5. Roof (sound-deadening, nests)
6. Lighting (bulb, fixtures, rheostats)

** Please Report all discrepancies to the Rangemaster or designee.

Upon completion of training, the user shall perform another walk-through inspection of the facility and identify any of damages listed above. The completed inspection forms are to be placed in the form box located at the entrance to building 9820, upon completion of inspection. Failure to document all damage(s) found in the facility could result to termination of use privileges and collection of repair cost from their agency. Any questions should be directed to the LFR Rangemaster.

Organization Representative (printed) ____________________________________________
User Signature ______________________________________________________________
Date/Time of Use _____________________________________________________________
Ammunition Used (specify) ___________________________________________________