

LICENSEE CONDUCTED FORCE-ON-FORCE EXERCISES AT CATEGORY I FUEL CYCLE FACILITIES

Effective Date: January 1, 2018

PROGRAM APPLICABILITY: 2681 Exhibit 3

81700.06-01 INSPECTION OBJECTIVES

01.01 To verify and assess the licensee's implementation of its protective strategy in accordance with the U.S. Nuclear Regulatory Commission (NRC)-approved security plans, regulatory requirements, and any other applicable requirement.

01.02 To evaluate the adequacy of the licensee's conduct of the annual force-on-force (FOF) exercises and assessment of performance via the critique process in order to identify and correct deficiencies of the onsite physical protection program and protective strategy.

01.03 To verify that the licensee's physical protection program associated with this sample is designed and implemented to meet the general performance objective of Title 10 of the *Code of Federal Regulations* (10 CFR) 73.20.

81700.06-02 INSPECTION REQUIREMENTS AND GUIDANCE

General Guidance.

This inspection activity is based on the requirement of 10 CFR 73.46(b)(9), which states in part, "The licensee shall conduct Tactical Response Team and guard exercises to demonstrate the overall security system effectiveness and the ability of the security force to perform response and contingency plan responsibilities and to demonstrate individual skills in assigned team duties. During each 12-month period commencing on the anniversary of the date specified in paragraph (i)(2)(ii) of 10 CFR 73.46, an exercise must be carried out at least every four months for each shift, one third of which are to be force-on-force." Within a licensee's FOF exercise process, licensees typically establish and implement specific protocols (standards) for the conduct of FOF drills and exercises to ensure the consistency and effectiveness of training and the process of evaluation. These specific protocols, which are normally documented in procedures, are an important aspect of the conduct of FOF drills and exercises and should be verified through inspection activity to ensure the licensee is implementing their FOF exercise process as designed and consistent with the criteria of 10 CFR 73.46(b)(9).

The inspection activity outlined in this procedure is to be conducted triennially or once every 3 years. In the calendar year which this inspection activity is required to be performed, it is to be conducted in conjunction with inspection procedure (IP) 81700.11, "Annual Observation of Licensee Conducted Force-on-Force Exercises at Category I Fuel Cycle Facilities." NRC-evaluated FOF inspections should not be used as a substitute for this inspection activity, as the objectives and scope of this inspection are designed to focus on the implementation of

the licensee's FOF exercise program. To the extent practicable, this inspection activity should not be conducted in the same year as the licensee's scheduled, NRC-evaluated FOF inspection. Ideally, within a 3 year period, this inspection activity, the inspection activity outlined in IP 81700.05, "Category I Fuel Cycle Facility Physical Protection Program and Protective Strategy," and the inspection activity outlined in IP 96001, "NRC Force-on-Force Inspections at Category I Fuel Cycle Facilities," should be conducted in separate years with no two inspections being conducted in the same year.

Through verification of the inspection requirements within this IP, inspectors shall ensure that the licensee's physical protection program associated with this sample is designed and implemented to meet the general performance objective of 10 CFR 73.20.

In preparing to complete this procedure, inspectors should familiarize themselves with relevant documentation, which may include, but is not limited to, the licensee's security plans, site specific and/or corporate implementing procedures, security post orders, and security program reviews and audits.

Inspector(s) are responsible for ensuring that the minimum sample identified in this IP is completed and evaluated. The guidance within this procedure is provided as a tool that: (1) recommends to inspectors certain methods and techniques for determining licensee security program compliance and effectiveness related to an inspection sample or; (2) clarifies certain aspects of a regulatory requirement associated with a particular inspection sample. Where minimum sampling numbers are indicated (i.e., at least three intrusion detection system zones shall be tested, or at least 20 percent of the total personnel on a shift will be selected for weapons firing etc.), inspectors shall adhere as closely as possible to the numbers identified in the guidance. Inspectors may expand the minimum number to aid in determining the extent of the condition, should compliance concerns arise. Completion of other recommended actions contained within the guidance of this procedure should not be viewed as mandatory and is only intended to assist the inspector(s) in determining whether the inspection sample has been adequately addressed. Should questions arise regarding procedural requirements or guidance, the inspector(s) should consult with regional management or the Office of Nuclear Security and Incident Response (NSIR), the program office, for clarification.

Inspectors should coordinate the conduct of the inspection with the licensee's staff before the inspection. Key areas of coordination include, but are not limited to the following:

- a. Coordinating the opportunity to interface with personnel that will be participating in the exercise as exercise controllers (response force and adversary), members of the site's composite adversary team, and the exercise lead controller to query them regarding their knowledge, skills, abilities, and responsibilities to fulfill their designated role;
- b. Coordinating the review of the scenario selected and developed for the exercise to include controller matrices, paying specific attention to the control measures that have been established to simulate actions and events to be portrayed during the exercise;
- c. Coordinating the review of exercise documentation for the last FOF exercises conducted by the site to include any corrective actions generated as a result of those exercises.

TIER I

02.01 Force-on-Force Exercise Program.

- a. Verify that the licensee has developed, implemented, and is maintaining an FOF exercise program that is documented in procedures which describes how the licensee will demonstrate and assess the effectiveness of its onsite physical protection program and protective strategy through tactical response drills and FOF exercises.

Specific Guidance.

For this inspection requirement, the inspector(s) should review security plans, implementing procedures, and associated training documentation to verify that the licensee has established, implemented, and maintains an FOF exercise program that describes how the licensee will demonstrate and assess the effectiveness of its onsite physical protection program and protective strategy through tactical response and FOF exercises.

- b. Verify that the licensee conducts FOF exercises in accordance with NRC-approved security plans, the site's protective strategy, and implementing procedures.

Specific Guidance.

For this inspection requirement, the inspector(s) should review security plans, implementing procedures, and associated training documentation to verify that the licensee implements its FOF exercise program consistent with the processes, measures, and direction outlined in associated security plans and implementing procedures.

- c. Verify that the licensee maintains documentation of FOF exercise program information, (e.g., information resultant from the post exercise critique, scenario and control measure information, and exercise records of participants for all FOF exercises).

Specific Guidance.

No inspection guidance.

- d. Verify that each member of each shift who is assigned duties and responsibilities required to implement the site's safeguards contingency plan and protective strategy participates in tactical response drills and FOF exercises at the frequency prescribed in 10 CFR 73.46(b)(9).

Specific Guidance.

For this inspection requirement, the inspector(s) should review the licensee's training documentation (to include a sample of individual training records) to verify that the licensee has established measures to ensure that each member of each shift, who is assigned duties and responsibilities to implement the site's safeguards contingency plan and protective strategy, participates in tactical response drills and FOF exercises at the following frequency: an exercise must be carried out at least every 4 months for each shift, one third of which are to be FOF. The triennial FOF exercise conducted by

the NRC may be counted as the annual FOF exercise for the security personnel involved.

Tactical response drills and FOF exercises conducted every 4 months should include activities that are designed to enhance the tactical response knowledge, skills, and abilities of the site security personnel who are assigned duties and responsibilities required to implement the site's safeguards contingency plan and protective strategy. The FOF exercises conducted should consist of a performance-based simulation of the implementation of the site's protective strategy against the applicable design basis threat (DBT) of radiological sabotage, theft, and diversion consistent with 10 CFR 73.1(a).

During tactical response drills and FOF exercises, individuals may participate in any one of the security response roles identified within the licensee's security plans and protective strategy to satisfy this requirement as a participant (e.g., response team leaders, alarm station operators, tactical response team members, armed officers designated as a component of the protective strategy, etc.).

- e. Verify that the licensee implements a methodology to track and correct findings, deficiencies, and failures identified during tactical response drills and FOF exercises to include associated training that adversely affects or decreases the effectiveness of the site's protective strategy.

Specific Guidance.

For this inspection requirement, the inspector(s) should understand the methodology the licensee uses to disposition each deficiency identified in a tactical response drill or FOF exercise and what mechanism(s) the licensee uses to correct those deficiencies.

The inspector(s) should ensure that the licensee has established measures to address deficiencies identified during exercises consistent with the site's corrective action, self-assessment, or training program. All deficiencies should be evaluated to ensure proper management, action, and resolution of the deficiencies. Some deficiencies (training and human performance related) may be addressed through the training program.

Deficiencies that the licensee determines to adversely affect or decrease the effectiveness of the protective strategy and physical protection program should be evaluated using the site's corrective action methodology.

To assist in this verification, the inspector(s) should request that the licensee provide tactical response and FOF exercise reports that document deficiencies. The inspector(s) should also request to review the documentation pertaining to the licensee's evaluation of the deficiencies to understand the licensee's method to disposition identified deficiencies and determine whether or not the deficiencies adversely affect or decrease the effectiveness of the protective strategy and physical protection program. The inspector(s) should also query site personnel on the basis for determining how the licensee disposes deficiencies. The inspector(s) should then further request to see the associated documentation that indicates that the failure(s) were evaluated using the site's corrective action methodology.

TIER II

02.02 Force-on-Force Exercise Program Elements.

General Guidance.

For the inspection requirements that follow, the inspector(s) should verify through the inspection and observation of the licensee's exercise preparation, exercise implementation, and post-exercise activities (including the exercise critique), that the licensee's FOF exercise program is designed to: (1) challenge the site's physical protection program and protective strategy; (2) include multiple characteristics and capabilities of the DBT of radiological sabotage, theft, and diversion consistent with 10 CFR 73.1(a); (3) include simulations that minimize artificiality and provide maximum opportunity for performance demonstration; (4) include training and qualification standards for the duties of exercise controllers and the licensee's composite adversary team; (5) provide a structured system to safely and effectively facilitate and control FOF exercises; (6) provide a methodology to collect exercise data for evaluation and analysis; and (7) ensure the evaluation and analysis of exercise data collected for the implementation of timely and effective corrective actions.

- a. Verify that the licensee designs and conducts tactical response and FOF exercises consistent with site security plans and implementing procedures.

Specific Guidance.

For this inspection requirement, the inspector(s) should review samples of FOF exercise documentation of the exercise that will be observed to verify that the licensee designs and conducts exercises that includes criteria such as:

1. Uses no more than the specified number of response personnel performing the specific duties as required by the site security plans and protective strategy implementing procedures.
 2. Include simulations that minimize artificiality by providing stimulus similar to the action or event being simulated; and requires performance demonstration to the extent practicable to generate data points resultant from actions taken that can be evaluated.
 3. Implements the use of systems or methodologies that simulate the realities of armed engagement through visual and audible means, and reflect the capabilities of armed personnel to neutralize a target through the use of firearms.
 4. Ensures that each scenario used provides a credible, realistic challenge to the protective strategy and the capabilities of the security response organization by including multiple characteristics and capabilities of the DBT.
- b. Verify that the licensee uses a mock adversary force during tactical response drills and FOF exercises that replicates, as closely as possible, the adversary characteristics and capabilities of the DBT described in 10 CFR 73.1(a).

Specific Guidance.

For this inspection requirement, the inspector(s) should gain an understanding of whom the licensee uses to perform mock adversary duties during tactical response drills and FOF exercises. The licensee (who is being inspected) is responsible to ensure that the mock adversary force used during tactical response and FOF exercises is capable of replicating, as closely as possible, the adversary characteristics and capabilities of the DBT as described in 10 CFR 73.1(a) and Regulatory Guide (RG) 5.70, "Guidance for the Application of the Theft and Diversion Design-Basis Threat in the Design, Development, and Implementation of a Physical Security Program that Meets 10 CFR 73.45 and 10 CFR 73.46." The inspector(s) should request that the licensee provide composite adversary team training and qualification information (e.g., training modules, training syllabus, etc.) to verify that the licensee provides training to the members of the composite adversary team that closely replicates the DBT. Some training methodologies that licensees may use include internal or external training programs that are intended to prepare individuals to act as adversary force members in accordance with 10 CFR 73.1(a). The inspector(s) should conduct a comparison of the training provided to the licensee's mock adversary force and the adversary characteristics described in 10 CFR 73.1(a) and RG 5.70. Dependent upon personnel availability, the inspector(s) should interview mock adversary force team members to assist in understanding the level of knowledge that the members possess.

- c. Verify the licensee's controllers, used for tactical response drills and FOF exercises, are trained and qualified to ensure that each controller has the requisite knowledge and experience to control and evaluate drills and exercises.

Specific Guidance.

For the inspection of this requirement, the inspector(s) should review the licensee's security plans, implementing procedures, and training documentation to verify that the licensee's drills and exercise controllers are trained and qualified. Through this review, the inspector(s) should develop an understanding of the licensee's process for which personnel are trained and qualified to perform as controllers.

Once the training and qualification process is understood, the inspector(s) should then verify through the review of lesson plans and records that personnel who perform controller duties are trained and qualified in accordance with the licensee's processes and procedures. The licensee should ensure that exercise controllers are trained and qualified to ensure that each controller has the requisite knowledge and experience to control and evaluate player actions during drills and exercises in the following areas:

1. response team duties;
2. use-of-force;
3. tactical movement;
4. cover and concealment;
5. defensive positions;
6. fields-of-fire;
7. re-deployment;
8. communications (primary and alternate);
9. use of assigned equipment;
10. target areas;

11. table top drills;
12. command and control duties; and
13. licensee protective strategy.

The inspector(s) should also conduct interviews with personnel who perform controller duties to assist in understanding the requisite knowledge and experience of the individual(s) who is/are responsible to control and evaluate drills and exercises.

Additionally, the inspector(s) should ensure controllers possess specific knowledge and experience in the implementation of controller duties during drills and exercises such as controller actions related to:

1. time outs;
 2. providing earned information to players;
 3. safe drill play;
 4. red gun activities;
 5. Multiple Integrated Laser Engagement System limitations;
 6. false cover;
 7. simulations related to protective masks;
 8. simulations related to smoke and specific chemical agents;
 9. explosive and incendiary devices and their effects; and
 10. ballistic capabilities of exercise weapons.
- d. Verify that the licensee's tactical response drills and FOF exercises are conducted safely and in accordance with site safety plans.

Specific Guidance.

For this inspection requirement, the inspector(s) should review security plans, implementing procedures, and associated tactical response drill and FOF exercise documentation to verify that the licensee has established measures to ensure that drills and exercises are conducted in accordance with site safety plans. In general, the drill and exercise program should include provisions for the following: weapons/ammunition safety, exercise participant safety, site personnel safety, and consideration for radiological safety. Safety measures should be documented in the licensee's implementing procedures.

02.03 Reviews.

Events and Logs. Review and evaluate licensee event reports and safeguards log entries since the last inspection, which are associated with the licensee's FOF exercise program, and follow up, if appropriate.

Security Program Reviews. Verify that the licensee is conducting security program reviews in accordance with regulations and that the licensee's FOF exercise program was included in a review.

Corrective Action Program. Verify that the licensee is identifying issues related to its FOF exercise program at an appropriate threshold and entering them in the corrective

action program. Verify that the licensee has appropriately resolved the issues regarding regulatory requirements for a selected sample of problems associated with its FOF exercise program or protective strategy.

Specific Guidance.

The inspector should review all licensee event reports relating to the licensee FOF exercise program for follow-up at the site. If discrepancies or deficiencies are identified during this review, the inspector(s) should follow up as necessary. For this inspection requirement, the inspector(s) should review the documented results of the security program reviews or audits performed by the licensee to ensure the continued effectiveness of its FOF exercise program and protective strategy. The inspector(s) should ensure that the reviews have been conducted in accordance with the requirements of 10 CFR 73.46(g)(6). The inspector(s) should also request that the licensee provide a copy of the report that was developed and provided to licensee management for review. The inspector(s) should review the report to identify any findings that were identified via the review or audit to ensure the findings were entered in the licensee's corrective action program.

81700.06-03 PROCEDURE COMPLETION

This procedure is considered complete when the total minimum number of inspection requirements (five) are completed. The minimum number of inspection requirements shall be comprised of five Tier I inspection requirements.

The inspection of the total nominal number of inspection requirements (seven) within this procedure is the target for this sample and should be completed to the extent practicable. The nominal number of inspection requirements is defined as five Tier I inspection requirements and two Tier II inspection requirements.

The frequency at which this inspection activity is to be conducted is triennially (once every 3 years).

81700.06-04 RESOURCE ESTIMATE

The resource estimate for the completion of this procedure consists of approximately 16 hours for the inspection of the minimum number of inspection requirements and approximately 20 hours for inspection of nominal number of inspection requirements. The sample size for this procedure is 1.

END

Attachment 1: Revision History for IP 81700.06

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Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional, Non-Public Information)
N/A	ML16274A091 05/15/17 CN 17-010	Consolidated inspection procedures to increase efficiencies in the Fuel Cycle Inspection Program. This revision will replace IP81601-Safeguard Contingency Plan Implementation Review on the effective date.	None	ML16277A021
N/A	ML17240A293 10/27/17 CN 17-023	An administrative change was made to this procedure prior to implementation to remove one inspection requirement from this procedure to create the procedure for the annual observation of licensee exercises. This revision will replace IP81601-Safeguard Contingency Plan Implementation Review on the effective date.	None	ML17240A330