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MANAGING THE SAFETY/SECURITY INTERFACE

A. INTRODUCTION

This guide describes a method that the staff of the U.S. Nuclear Regulatory Commission (NRC) considers acceptable for licensees to assess and manage changes to safety and security activities so as to prevent or mitigate potential adverse effects that could negatively impact either plant safety or security.

The regulatory framework that the NRC has established for nuclear power plants consists of a number of regulations and supporting guidelines, including, but not limited to, Title 10, Part 50, "Domestic Licensing of Production and Utilization Facilities," of the *Code of Federal Regulations* (10 CFR Part 50) (Ref. 1) and 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants" (Ref. 2). New applicants should consider this guidance in preparing an application for a combined license under 10 CFR Part 52. This regulatory guide provides an approach that the NRC staff considers acceptable for licensees to use in satisfying the requirements of 10 CFR Part 73, "Physical Protection of Plants and Materials" (Ref. 3), and specifically 10 CFR 73.58, "Safety/Security Interface Requirements for Nuclear Power Reactors."

The approaches and examples described in this guidance provide a method of compliance for managing the interface between safety and security, but are not intended to be all inclusive. Licensees may employ alternative methods for implementing NRC regulations other than the approaches discussed here, provided that such measures satisfy the relevant NRC requirements. Each licensee should account for site-specific conditions when determining the measures needed for compliance with the applicable requirements in 10 CFR Parts 73, 50, or 52.

The NRC issues regulatory guides to describe an make available to the public methods that the NRC staff considers acceptable for use in implementing specific parts of the agency's regulations, techniques that the staff uses in evaluating specific problems or postulated accidents, and data that the staff needs in reviewing applications for permits and licenses. Regulatory guides are not substitutes for regulations, and compliance with them is not required. Methods and solutions that differ from those set forth in regulatory guides will be deemed acceptable if they provide a basis for the findings required for the issuance or continuance of a permit or license by the Commission.

This guide was issued after consideration of comments received from the public.

Regulatory guides are issued in 10 broad divisions-1, Power Reactors; 2, Research and Test Reactors; 3, Fuels and Materials Facilities; 4, Environmental and Siting; 5, Materials and Plant Protection; 6, Products; 7, Transportation; 8, Occupational Health; 9, Antitrust and Financial Review; and 10, General.

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The NRC issues regulatory guides to describe methods that the staff considers acceptable for use in implementing specific parts of the agency's regulations, to explain techniques that the staff uses in evaluating specific problems or postulated accidents, and to provide guidance to applicants. Regulatory guides are not substitutes for regulations, and compliance with them is not required.

This regulatory guide contains information collection requirements covered by 10 CFR Part 73 that the Office of Management and Budget (OMB) approved under OMB control number 3150-0002. The NRC may neither conduct nor sponsor, and a person is not required to respond to, an information collection request or requirement unless the requesting document displays a currently valid OMB control number.

B. DISCUSSION

The purpose of establishing and maintaining an effective interface between safety and security at a facility is to ensure that potential adverse effects from implementation of changes to safety and security measures are considered and addressed prior to implementation.

The interface between safety and security is an important element of both programs relative to ensuring public health and safety. The licensee should address plant activities that could compete or conflict with the capability of the site physical protection program to provide high assurance of adequate protection and common defense and security. Conversely, changes in the site physical protection program could also adversely affect plant operations; safety-related structures, systems, and components; operator actions; or emergency responses necessary to prevent or mitigate postulated design-basis accidents and to protect public health and safety and the environment.

Licensees of operating power reactors use management controls for reviewing, assessing, and managing plant activities or changes to provide continued assurance of adequate safety and security. However, 10 CFR 73.58 adds a requirement for licensees to assess and manage changes to these activities effectively. Licensees may expand or take credit for other plant processes to ensure an adequate interface between safety and security.

Each licensee is responsible for balancing the needs of both safety and security to ensure that all program goals, requirements, and procedures are met. The information provided in this regulatory guide is intended to clarify the NRC staff's position associated with the effective interface between safety and security to ensure that a licensee implements changes to its safety or security programs without adversely affecting other site programs (e.g., operations, security maintenance, emergency response).

C. REGULATORY POSITION

1. Requirements

- a. In accordance with 73.58(b) and (c), licensees must review planned and emergent changes and activities to identify any potential adverse impact of these changes or activities on safety and security before implementation. Each licensee is responsible for establishing, implementing, and maintaining site procedures that not only ensure that personnel knowledgeable in each program area participate in the site work control process, but also provide a means of communicating proposed changes to the appropriate personnel within each program area for review. Management controls or processes used to assess proposed facility changes may be qualitative, quantitative, or a combination of both based on the complexity of the proposed changes or planned activities.

- b. Licensees shall assess and manage their safety and security program activities in a manner that ensures that there are no adverse impacts on the safety and security activities. The requirements of 10 CFR 73.58 are:
 - (1) 10 CFR 73.58(b) states, “The licensee shall assess and manage the potential for adverse effects on safety and security, including the site emergency plan, before implementing changes to the plant configurations, facility conditions, or security.”
 - (2) 10 CFR 73.58(c) states, “The scope of changes to be assessed and managed must include planned and emergent activities (such as, but not limited to, physical modifications, procedural changes, changes to operator actions or security assignments, maintenance activities, system reconfiguration, access modification or restrictions, and changes to the security plan and its implementation).”
 - (3) 10 CFR 73.58(d), states, “Where potential adverse interactions are identified, the licensee shall communicate them to appropriate licensee personnel and take compensatory and/or mitigative actions to maintain safety and security under applicable Commission regulations, requirements, and license conditions.”
- c. Licensees should consider reviewing and updating existing procedures to reference the requirements of the interface between safety and security as outlined in 10 CFR 73.58. These procedures should clearly define processes to ensure that effective communications between the operations (safety) and security staffs is maintained at the facility.
- d. In accordance with 10 CFR 73.55(m), each licensee is responsible for ensuring that the reviews and audits of its site physical protection program include activities involving the safety/security interface.

2. Scope

- a. The licensee’s established controls and processes for managing the interface between safety and security should ensure that security personnel are notified of planned or unplanned changes to the characteristics of the site’s physical layout (including topographical changes); the configuration of facilities; structures, systems, and components; and the site’s operations procedures. Controls and processes should also ensure that the security organization has the opportunity to review proposed changes and activities to identify potential adverse impacts on the functions and performance of the elements of the site physical protection program established within the owner-controlled area, protected area, and vital areas. When physical and/or administrative changes are driven by operation or emergency planning, the licensee should assess the potential impacts of these changes on the functions and performance of the elements of its site physical protection program to prevent the inadvertent degradation of site protective strategy.
- b. Personnel knowledgeable of the site physical protection program should review proposed changes to the following program areas for potential adverse effects on security:
 - (1) operations,
 - (2) maintenance,
 - (3) work management (control and planning),
 - (4) nuclear training,
 - (5) nuclear engineering and support,
 - (6) radiation protection,
 - (7) emergency preparedness or planning,
 - (8) fire protection,
 - (9) chemistry (chemical safety),

- (10) environmental protection,
 - (11) industrial health and safety, and
 - (12) security.
- c. Personnel knowledgeable of the site physical protection program should review the following planned or emergent activities for potential adverse effects on security:
- (1) activities that could cause a loss of primary power to security systems,
 - (2) the installation or removal of a barrier that could adversely impact safety, security, or emergency response,
 - (3) the placement of trailers or heavy equipment that could obstruct detection or assessment functions or increase the response times of security personnel,
 - (4) the installation of chemical or hazardous material storage tanks adjacent to a protected fighting position,
 - (5) fire protection manual operator actions that do not account for paths of travel through the security fields of fire, which could delay or prevent operator response and invalidate safety assumptions and credit for operator actions,
 - (6) construction activities that remove or degrade physical barriers, thus allowing established access controls to be bypassed,
 - (7) the installation of barriers that increase the security response timelines that interfere with protected fighting positions and fields of fire, and that interfere with or prevent detection and assessment functions, and
 - (8) changes to target set equipment that could impact its availability or operability.
- d. To facilitate the safety/security assessment process, the licensee may choose to evaluate changes using predetermined questions that are specifically designed to identify potential conflicts in an efficient, yet adequately detailed, manner. Current “change management” processes that licensees may consider for use in developing screening questions include, but are not limited to:
- (1) 10 CFR 50.54(a) process for screening changes to quality assurance plans,
 - (2) 10 CFR 50.54(p) process for screening changes to the security (physical security, training qualification, contingency) plan,
 - (3) 10 CFR 50.54(q) and 10 CFR 50.47(b) processes for screening changes to the emergency Plan, and
 - (4) 10 CFR 50.59, “Changes, Tests, and Experiments,” and Regulatory Guide 1.187 “Guidance for Implementation of 10 CFR 50.59, ‘Changes, Tests, and Experiments,’” (Ref. 4) processes for evaluating changes, tests, and experiments.
- e. The following are examples of questions that may be used for the screening of planned and emergent activities or changes:
- (1) Could the proposed change or activity decrease the reliability or availability of a security system to perform the intended functions?
 - (2) Could the proposed change or activity increase the likelihood of malfunctions of security equipment or systems?
 - (3) Could the proposed change or activity decrease the effectiveness of NRC-approved security plans or invalidate the site protective strategy (e.g., communications, response timelines and pathways, equipment and systems (particularly target sets), or protected fighting positions and fields of fire)?

- (4) Could the proposed change or activity interfere with detection (i.e., interior and exterior sensors, zone of detection and field of view, alarm communications, or access control systems) and assessment functions?
- (5) Could the proposed change or activity increase response times of emergency or armed security personnel (e.g., manmade or natural and active or passive vehicle barriers, vehicle access control and channeling barriers, access delay systems, exterior (protected area) delay barriers, interior delay barriers (passive, active, or dispensable))?
- (6) Could the proposed change or activity increase the numbers of, change configurations of, or create a new target set(s) from those previously evaluated?
- (7) Could the proposed change or activity reduce adversary task times?
- (8) Could the proposed change or activity result in noncompliance with the NRC's security regulations?

If the answer to any of these screening questions is "yes," compensatory or mitigative actions or both may be necessary to maintain safety or security. If required, the licensee should communicate the action to its appropriate personnel.

3. Management Controls and Processes

- a. For those plant changes that could affect security, the licensee should establish controls or processes to assess and manage operational changes to include emergency planning for both planned and emergent activities that could impact: (1) the effectiveness, reliability, and availability of the systems of the site physical protection program; (2) the effective implementation of the site protective strategy; and (3) the effectiveness of the site security plans, implementing procedures, or license conditions. The objective is to verify that a proposed change or activity will not inhibit compliance with security requirements or reduce the effectiveness, reliability, or availability of the licensee's site physical protection program credited for protection against the design basis threat.
- b. One acceptable method to meet the requirements of 10 CFR 73.58 is for licensees to evaluate existing and proposed programmatic controls (i.e., plant operations review committees; plant review boards; safety review committees; independent safety reviews; work planning and controls; configuration management; review and audit programs; corrective actions and reporting programs; engineering, design, and project management; maintenance; and other controls that exist at an operating nuclear power plant). Using existing controls to implement the interface between safety and security will help to ensure that assessment and management of facility changes and activities includes the physical protection program.
- c. The licensee should develop or consolidate crosscutting controls, processes, and procedures to assess and manage the potential for adverse safety and security interactions that may result from changes to the configuration of the site, changes in equipment status, and changes to site procedures. These management controls or processes typically ensure that licensee personnel identify, describe, review, approve, monitor, implement, and document emergent and planned operations or activities.
- d. For those security changes that could affect safety, the licensee should establish controls or processes to assess and manage security-related changes to both planned and emergent activities that could impact safe plant operations, including emergency planning.
- e. The licensee should use the existing management controls and processes described in 10 CFR 50.59 to evaluate proposed changes in the design or operation of its site physical protection program that could affect elements of plant operation including emergency preparedness.

- f. The licensee should conduct reviews and audits to confirm that procedures established to control any changes to the plant configuration, including emergencies, comply with the licensee's security program. The review should encompass plant operations; plant modifications; and plant safety programs, processes, and procedures. The licensee may audit engineering and design, safety analysis, work controls, construction, maintenance, and other activities. The procedures governing these and other activities should include security reviews: (1) to identify safety activities or conditions that could affect security; (2) to identify security activities or conditions that could affect safety; and (3) to provide a means for resolving conflicting or competing safety and security interests. To prevent recurrence, corrections to specific or programmatic issues should be managed through the site's corrective action program for tracking, trending, communications, and completion.

4. Training

- a. The licensee should provide training that addresses changes in the updated procedures and corresponding guidance documents to managers involved in the process of facilitating the interface between safety and security.

D. IMPLEMENTATION

The purpose of this section is to provide information to applicants and licensees regarding the NRC staff's plans for using this regulatory guide.

The NRC has issued this guidance after considering all public comments received. In some cases, applicants or licensees may propose an alternative or use a previously established acceptable alternative method for complying with specified portions of the NRC's regulations. Otherwise, the methods described in this guide will be used in evaluating compliance with the applicable regulations for license applications, license amendment applications, and amendment requests.

REFERENCES¹

1. 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," U.S. Nuclear Regulatory Commission, Washington DC.
2. 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," U.S. Nuclear Regulatory Commission, Washington DC.
3. 10 CFR Part 73, "Physical Protection of Plants and Materials," U.S. Nuclear Regulatory Commission, Washington DC.
4. Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," U.S. Nuclear Regulatory Commission, Washington DC.

¹ Publicly available NRC published documents such as regulations, regulatory guides, NUREGs, and generic letters listed herein are available electronically through the Electronic Reading Room on the NRC's public Web site at: <http://www.nrc.gov/reading-rm/doc-collections/>. Copies are also available for inspection or copying for a fee from the NRC's Public Document Room (PDR) at 11555 Rockville Pike, Rockville, MD; the mailing address is USNRC PDR, Washington, DC 20555; telephone 301-415-4737 or (800) 397-4209; fax (301) 415-3548; and e-mail PDR.Resource@nrc.gov.