

DRAFT RULE LANGUAGE – ACCESS AUTHORIZATION AND PHYSICAL SECURITY FOR NUCLEAR POWER PLANT CONSTRUCTION

The Nuclear Regulatory Commission (NRC) is making available draft proposed rule language to amend its regulations. The proposal would amend requirements in §§ 50.34, 50.54, 52.79, 73.1, 73.21, 73.22, 73.52, and 73.58 of Title 10 of the Code of Federal Regulations (10 CFR) related to access authorization and physical security for nuclear power plant construction activities under a construction permit or a combined license. Specifically, the NRC is proposing new provisions that apply during nuclear power plant construction. The new provisions would require (1) physical protection measures; (2) access authorization controls; (3) physical inspections; (4) performance of high-quality security sweeps; and (5) lockdown measures and procedures for securing the security- and safety-related structures, systems, and components before entering operation. The rule focuses on the detection of malicious acts, such as high quality security sweeps and lockdown procedures prior to the arrival of licensed material and the plant's transition into its operational phase. Requirements for fingerprinting during construction are not included in the draft proposed rule language. However, stakeholders may provide comments on including a fingerprinting requirement in the access requirements for this rule. The staff will then consider stakeholder input on the fingerprinting issue, and provide a recommendation to the Commission when the proposed rule is provided for the Commission's approval.

The availability of the draft proposed rule language is intended to inform stakeholders of the current status of the NRC staff's rulemaking activities for access authorization and physical security for nuclear power plant construction and solicit public comments on the provided information in preparation for a public workshop on this topic on March 31, 2010. The NRC will review and consider any comments received for information only; the NRC will not respond to any comments received at this pre-rulemaking stage. As appropriate, the Statements of Consideration for the proposed rule will briefly discuss any substantive changes made to the proposed rule language as a result of comments received. Once published as a proposed rule, stakeholders will have an opportunity to comment on the proposed rule language, and the NRC will respond to any such comments in the Statements of Consideration for the final rule. Point of contact for further information is R. Frederick Schofer, Office of New Reactors, telephone (301) 415-5682, e-mail: Fred.Schofer@nrc.gov or Brad Baxter, Office of Nuclear Security and Incident Response, telephone 301-415-6742, e-mail: Brad.Baxter@nrc.gov.

§ 50.34 Contents of applications; technical information.

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(j) Construction security plan.

(1) The requirements of paragraphs (j)(1)(i) through (j)(1)(iii) of this section apply to applicants for construction permits or operating licenses (hereafter referred to as applicants in this section) and the requirements of paragraph (j)(1)(iv) of this section apply to applicants who request the reinstatement of a construction permit for facilities in either a deferred or terminated plant status as follows:

(i) Applicants for a construction permit under this part that do not have a docketed application after [INSERT EFFECTIVE DATE OF THE FINAL RULE] shall submit the written

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construction security plan required by § 73.52 of this chapter with the proposed implementation schedule and proposed milestones in their application.

(ii) Applicants for a construction permit under this part that have a docketed application before [INSERT EFFECTIVE DATE OF THE FINAL RULE] shall amend their application to include a written construction security plan required by § 73.52 of this chapter with the proposed implementation schedule and proposed milestones no later than 6 months after [INSERT EFFECTIVE DATE OF THE FINAL RULE].

(iii) Holders of a construction permit under this part that have not received an operating license under this part before [INSERT EFFECTIVE DATE OF THE FINAL RULE] and do not meet the security boundary requirements contained within § 73.52(a)(3) of this chapter shall submit the written construction security plan and the proposed implementation schedule with proposed milestones as a separate submittal in accordance with 10 CFR 50.90 no later than 6 months after [INSERT EFFECTIVE DATE OF THE FINAL RULE].

(iv) Holders of a construction permit for a facility which is in either deferred or terminated plant status prior to [INSERT EFFECTIVE DATE OF THE FINAL RULE] and does not meet the security boundary requirements contained within § 73.52(a)(3) of this chapter shall submit the written construction security plan required by § 73.52 of this chapter and the proposed implementation schedule with proposed milestones no later than 120 days before reactivating construction.

(2) Applicants who cannot meet the deadline identified in paragraph (j)(1) of this section must submit by the deadline date a request for an extension to the Director of the Office of Nuclear Reactor Regulation and demonstrate good cause for the request.

(3) The written construction security plan must describe:

(i) How the applicant will meet the requirements of 10 CFR 73.52;

(ii) A description of the implementation of the construction security plan; and

(iii) A description of the plan to transition from the construction security plan to the physical security plan required in 10 CFR 73.55.

(4) Applicants shall protect the written construction security plan in accordance with 10 CFR 73.22.

(5) Each applicant shall provide a letter to the NRC at least 60 days before implementing physical protection measures identified in § 73.52(d) of this chapter as notification of the planned transition to the next construction phase.

§ 50.54 Conditions of licenses.

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(ii)(1) The licensee shall implement and maintain its written construction security plan in accordance with §73.52 of this chapter. The licensee may not make a change which would decrease the effectiveness of the construction security plan without prior approval of the

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Commission. A licensee desiring to make such a change shall submit an application for amendment to the license under § 50.90.

(2) The licensee may make changes to the plans referenced in paragraph (ii)(1) of this section without prior Commission approval if the changes do not decrease the effectiveness of the plan. The licensee shall maintain records of changes to the plans made without prior Commission approval and shall submit, as specified in § 50.4 or § 52.3 of this chapter, a report containing a description of each change within 60 calendar days after the change is made.

(3) The licensee shall provide for the development, revision, implementation, and maintenance of its written construction security plan. The licensee shall ensure that all plan elements are reviewed by individuals independent of both security plant management and personnel who have direct responsibility for implementation of the construction security plan at intervals not to exceed 12 months.

(4) The results and recommendations of construction security plan reviews, management's findings regarding plan effectiveness, and any actions taken as a result of recommendations from prior plan reviews, must be documented in a report to the licensee's construction manager and to corporate management at least one level higher than that having responsibility for plan implementation. These reports must be maintained in an auditable form, available for inspection.

(5) The licensee shall use the site corrective action program to track, trend, correct and prevent recurrence of failures and deficiencies in the construction access authorization and physical protection program.

(6) Upon implementation of the physical security plan required by §73.55 of this chapter, the licensee shall terminate the construction security plan without NRC approval. The licensee must maintain a copy of the written construction security plan enforced at the time the construction security plan is terminated for no less than 3 years from the date of termination.

§ 52.79 Contents of applications; technical information in final safety analysis report.

(a) * * *

(48)(i) A construction security plan describing how the applicant will meet the requirements of 10 CFR 73.52.

(ii) A description of the implementation of the construction security plan.

(iii) A description of the plan to transition from the construction security plan to the physical security plan required in 10 CFR 73.55.

(iv) Applicants shall protect the construction security plan in accordance with 10 CFR 73.22.

(v) Each applicant shall provide a letter to the NRC at least 60 days before implementing physical protection measures identified in § 73.52(d) of this chapter as notification of the planned transition to the next construction phase.

§ 73.1 Purpose and scope.

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(b) * * *

(1) * * *

(i) The physical protection of production and utilization facilities licensed under parts 50 or 52 of this chapter including protection during construction,

§ 73.21 Protection of Safeguards Information: Performance requirements.

(a) * * *

(1) * * *

(i) Establish, implement, and maintain an information protection system that includes the applicable measures for Safeguards Information specified in §73.22 related to: power reactors in operation or under construction; a formula quantity of strategic special nuclear material; transportation of or delivery to a carrier for transportation of a formula quantity of strategic special nuclear material or more than 100 grams of irradiated reactor fuel; uranium hexafluoride production or conversion facilities; fuel fabrication facilities; uranium enrichment facilities; independent spent fuel storage installations; and geologic repository operations areas.

§ 73.22 Protection of Safeguards Information: Specific requirements.

This section contains specific requirements for the protection of Safeguards Information in the hands of any person subject to the requirements of §73.21(a)(1)(i) and related to power reactors in operation or under construction; a formula quantity of strategic special nuclear material; transportation of or delivery to a carrier for transportation of a formula quantity of strategic special nuclear material or more than 100 grams of irradiated reactor fuel; uranium hexafluoride production or conversion facilities, fuel fabrication facilities, and uranium enrichment facilities; independent spent fuel storage installations; geologic repository operations areas and Safeguards Information in the hands of any person subject to the requirements of §73.21(a)(1)(iii).

(a) * * *

(1) * * *

(xiii) The written construction security plan for the power reactor facility or site.

§ 73.52 Construction site access authorization and physical protection.

(a) *Scope and implementation.* (1) Applicants for an operating license under Part 50 of this chapter shall comply with the requirements of this section. Applicants for a combined license under part 52 of this chapter, and holders of a combined license issued prior to [INSERT

EFFECTIVE DATE OF FINAL RULE] until the date that the Commission makes the finding under § 52.103(g) of this chapter shall comply with the requirements of this section as described below:

(i) Applicants for a combined license under part 52 of this chapter who do not have a docketed application before [INSERT EFFECTIVE DATE OF THE FINAL RULE] shall submit the construction security plan and the proposed implementation schedule with proposed milestones in their application.

(ii) Applicants for a combined license under part 52 of this chapter who have a docketed application before [INSERT EFFECTIVE DATE OF THE FINAL RULE] shall amend their application to include a construction security plan and the proposed implementation schedule with proposed milestones no later than 6 months after [INSERT EFFECTIVE DATE OF THE FINAL RULE].

(iii) Holders of a combined license issued prior to [INSERT EFFECTIVE DATE OF THE FINAL RULE] until the date that the Commission makes the finding under § 52.103(g) of this chapter that do not meet the security boundary requirements contained within paragraph § 73.52(a)(3) of this chapter shall submit the construction security plan and the proposed implementation schedule with proposed milestones in accordance with 10 CFR 50.90 no later than 6 months after [INSERT EFFECTIVE DATE OF THE FINAL RULE].

(iv) Applicants who cannot meet the deadline must submit by the deadline date a request for an extension to the Director of the Office of New Reactors and demonstrate good cause for the request.

(2) Assembly or modular fabrication facilities located outside of the owner-designated construction area are excluded from the requirements of this section.

(3) Licensees constructing security- or safety-related SSCs within an existing protected area of a nuclear power facility subject to the requirements of 10 CFR 73.55, are considered to have met the requirements of this section.

(4) Before the written construction security plan becomes effective, the licensee shall have:

(i) Access authorization and physical security capabilities specified in the written construction security plan implemented;

(ii) Detailed site specific security procedures developed and available at the licensee's construction site;

(iii) All appropriate security personnel in place and performing the functions as outlined in the written construction security plan and specified in the detailed site specific security procedures; and

(iv) A process for assessing and managing the safety / security interface requirements under § 73.58 of this section between a construction site co-located or adjacent to an operating nuclear power facility.

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(b) *Construction Security Plan.* (1) The licensee's written construction security plan shall identify, describe, and account for site specific conditions that affect the capability to satisfy the requirements of this section.

(2) The licensee is responsible for maintaining the written construction security plan through the implementation of written construction security procedures.

(3) Upon the request of an authorized representative of the NRC, the licensee shall demonstrate the ability to meet NRC requirements through the implementation of the construction security plan, including the ability of personnel to perform assigned duties and responsibilities required by the construction security plan and licensee procedures.

(c) *General performance objectives.* (1) The licensee shall establish and maintain a written construction security plan, including a security organization. The objective of the construction security plan is to provide assurance that malicious acts during construction can not later reasonably result directly or indirectly in radiological sabotage as defined by 10 CFR 73.2.

(2) To achieve this performance objective the written construction security plan must be designed to:

(i) Minimize onsite surveillance of security- and safety-related SSCs by unauthorized personnel;

(ii) Deter malicious acts to security- and safety-related SSCs; and

(iii) Detect malicious acts to security- and safety-related SSCs.

(3) To achieve these objectives the written construction security plan must provide:

(i) Physical security and access authorization measures for the pouring of security- and safety-related structural concrete excluding the basemat;

(ii) Physical security measures and access authorization measures for the placement of security- and safety-related SSCs;

(iii) Physical security measures and access authorization measures for transitioning to the physical security program required under § 73.55 of this chapter; and

(iv) A transition schedule to the operational security program required under § 73.55 of this chapter.

(d) *Specific Security Requirements.* The licensee's construction site access authorization and physical protection programs must provide measures as specified in this subsection.

(1) Phase 1 Construction.

(i) Scope. Phase 1 construction begins with the installation, pouring, or erection of security- or safety-related structural concrete excluding the basemat and ends when Phase 2 construction begins as described in § 73.52(d)(2) of this chapter. The licensee shall implement the requirements of this paragraph before entry into Phase 1 construction. These measures must be maintained until the operational security plan is implemented.

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(ii) Access requirements.

(A) Access background checks. The licensee shall perform background checks of personnel and shall ensure that a trustworthiness and reliability determination of such individuals have been completed before granting access to the controlled access construction area and every 6 months thereafter while maintaining unescorted access to the controlled access construction area.

(B) Reviewing official. (1) The licensee shall designate a reviewing official who shall determine whether to grant, certify, deny, unfavorably terminate, or maintain an individual's unescorted access based on an evaluation of all of the information required by this section.

(2) The reviewing official or officials shall be responsible for reviewing and evaluating all data collected about an individual, including potentially disqualifying information, behavioral observation data, and/or any subsequent determination of fitness to determine whether the individual may be certified unescorted access authorization or granted unescorted access by a licensee.

(3) The designated reviewing official must have a demonstrated knowledge of all aspects of the access authorization program and applicable fitness-for-duty program requirements impacting an individual's access authorization.

(4) The licensee shall have determined that the designated reviewing official is trustworthy and reliable as defined in §26.5 of this chapter to perform duties related to certification of unescorted access or granting unescorted access.

(C) Initial access. The licensee shall ensure that the following screening measures are completed prior to permitting any individual access to the controlled construction area:

(1) The licensee shall verify identity through the compilation of information and other comparable data presented by the individual and reviewed by a reviewing official.

(2) The licensee shall verify the individual's identity by comparing official photo identification (e.g., State-issued driver's license; a United States issued passport; identification card issued by a State or outlying possession of the United States if it contains a photograph with comparable data; or government identification card) with the physical characteristics of the individual.

(3) The licensee shall complete an NRC demographic data check for all applicants. Demographic data information obtained by the licensee under this section shall be submitted to the NRC for processing.

(D) Maintaining unescorted access.

(1) Demographic data check. The licensee shall conduct a semiannual demographic data check by forwarding to the NRC demographic data information for all personnel with current access to the controlled access construction area.

(2) Identification Badges. The licensee shall provide numbered picture identification badges for all construction site workers authorized unescorted access to the controlled access construction area.

(i) Badges must be visibly displayed at all times while in the controlled access construction area.

(ii) The licensee shall maintain a record, to include the name and areas to which unescorted access is granted, of all individuals to whom photo identification badges have been issued.

(iii) Badges shall be issued to visitors who are authorized access to the controlled access construction area under the licensee's construction security procedures. Visitor badges must clearly identify that the person is a visitor.

(E) Construction Area Behavioral Observation Program. The licensee shall establish, implement, and maintain a construction area behavioral observation program and shall describe the program in the written construction security plan. The behavioral observation program must, at a minimum, contain the following features:

(1) The licensee shall ensure that personnel are trained to report illegal actions, to possess certain knowledge and abilities related to drugs and alcohol, and to recognize behaviors adverse to the safe operation and security of the facility by observing the behavior of others in the workplace and detecting and reporting aberrant behavior or changes in behavior that might adversely impact an individual's trustworthiness or reliability.

(2) Management and oversight personnel that are responsible for observing individuals subject to a Behavioral Observation Program shall be required to report any fitness-for-duty concerns about individuals to the reviewing official.

(3) The licensee shall ensure that personnel are trained to promptly report aberrant or noticeable changes in behavior or fitness-for-duty concerns about other individuals to the reviewing official for appropriate evaluation and action under the Behavior Observation Program.

(iii) Physical security requirements.

(A) Site requirements. The licensee shall implement onsite surveillance for unauthorized activity of personnel at the nuclear reactor construction site. Security personnel shall:

(1) Conduct periodic security patrols of construction site for unauthorized activity;

(2) Respond, assess and report to security and facilities operation supervision incidences of damage or alteration of the physical barrier required in paragraph (B) of this section,

(3) Respond, assess and report to security and facilities operation supervision unauthorized activities,

(4) Report incidence of criminal damage, trespassing and/or willful alteration of the physical barrier to security, facilities operation supervision, and local law enforcement agencies; and

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(5) Notify and establish communications between the security and/or facility operation supervision of any potential hostile action and for emergency conditions at the construction site.

(B) Controlled access construction area requirements.

(1) The licensee shall install a physical barrier to provide clear separation of the controlled access construction area occupied by security- and safety-related SSCs from the surrounding area. The barrier must be designed to only allow entry of authorized persons and material into the controlled access construction area through control points and to deter unauthorized access attempts.

(2) The licensee shall provide a construction site security force composed of personnel to secure the security- and safety-related SSC controlled access construction area.

(3) Security personnel shall, at all times, provide surveillance of the controlled access construction area for unauthorized activity. The security personnel shall:

(i) Observe the activities within the controlled access construction area;

(ii) Observe and report to security, facilities operation supervision, and local law enforcement agencies incidences of criminal damage or willful alteration of the physical barrier required in paragraph (d)(1)(iii)(B)(1) of § 73.52;

(iii) Use monitored surveillance equipment to observe the controlled access construction area;

(iv) Conduct random patrols of the controlled access construction area; and

(v) Ensure that the controlled access construction area is provided with sufficient illumination or low-light technology necessary to assess and respond to unauthorized activity and damages to or alteration of the required physical barrier(s).

(2) Phase 2 Construction.

(i) Scope. Phase 2 construction begins with the initiation of the onsite in-place setting, installing, or erecting of security- or safety-related systems or components and ends when the physical security plan is implemented. These measures are in addition to those specified in §73.52(d)(1) of this section and shall be maintained until the physical security plan required under §73.55 of this chapter is implemented.

(ii) Access requirements.

(A) The licensee shall have sufficient security measures in place to control access to controlled access construction areas. Access to these secured areas must be limited to specifically authorized individuals whose authorization is documented. Security shall maintain a visitor control register in which all visitors shall register their name, date, time, purpose of visit, employment affiliation, citizenship, and name of the individual to be visited before being escorted into any controlled access construction area.

(B) The licensee shall use only authorized personnel to escort visitors within controlled access construction areas to monitor these visitors for suspicious activity and events.

(C) The licensee shall grant access to the controlled access construction area to emergency responders (including, but not limited to, accident assessment, ambulance, medical, fire and rescue, traffic control, and law enforcement services) in performance of their duties. Local law enforcement agency personnel on official duty are permitted to retain their duty weapon(s) when entering the controlled access construction area and are exempted from controlled access area search requirements.

(iii) Search program requirements. The licensee shall describe in implementing procedures the inspection process to ensure personnel, vehicles, and materials are searched prior to entry into the controlled access construction area. A search and inspection process shall detect and deter the introduction of firearms, explosives, and incendiary devices that could be used to commit malicious acts that could later reasonably result directly or indirectly in radiological sabotage.

(A) Security personnel shall observe the offloading of authorized delivery vehicles whose contents cannot be readily be verified due to the size, shape, weight, or other reasons, of the load.

(B) Security personnel shall escort personnel who are not subject to the licensee's search requirements.

(C) Control of Explosives.

(1) The licensee shall control all explosives within the controlled access construction area and ensure that explosives are handled in accordance with any applicable local, State, and Federal requirement.

(2) The licensee shall establish a program that, at a minimum, ensures that:

(i) Authorized explosives are stored outside the controlled access construction area;

(ii) Authorized explosives are maintained in locked storage unless being placed for use;
and

(iii) Authorized explosives are subject to control and accountability measures.

(3) Phase 3 Transition to the physical security plan.

(i) Scope. The transition from the construction security plan to the physical security plan required under 10 CFR 73.55 must begin no later than 365 days before the scheduled date for initial loading of fuel and ends when the physical security plan under 10 CFR 73.55 is implemented. These measures are in addition to those specified in §§73.52(d)(1) and (2) of this section and shall be maintained until the physical security plan required under §73.55 of this chapter is implemented.

(ii) Access authorization requirements. Personnel such as security, maintenance, and operations personnel who are considered dependable in judgment, character, and performance, who make determinations with regard to approval, conformance, certification, or observations

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for security- and safety-related SSCs shall be cleared through the access authorization plan under the requirements of this section for access authorization before conducting detailed sweeps and vitalization.

(iii) Physical protection requirements.

(A) Security sweeps of controlled access construction areas.

(1) The licensee shall complete a security sweep before the lockdown of a controlled access construction area in accordance with paragraph (B) of this section.

(2) Security sweeps must be designed to:

(i) Assess whether there are indications of tampering (e.g., damaged equipment);

(ii) Determine whether contraband or other unauthorized material has been introduced into the controlled access construction area;

(iii) Include examinations to visually inspect, identify, and remove unauthorized material from the controlled access construction area;

(iv) Emphasize the inspection of personnel and material access to security- and safety related SSCs; and

(v) Be performed by individuals knowledgeable in the SSCs being inspected and who have expertise and knowledge in conducting detailed searches for security sweeps of security- and safety-related SSC areas.

(3) Security and other personnel designated to conduct the security sweeps must be cleared through the fitness-for-duty process under 10 CFR part 26 and the access authorization program under this section.

(B) Lockdown of the controlled access construction areas.

(1) The licensee shall ensure that controlled access construction areas are locked down after completion of security sweeps required by paragraph (A) of this section.

(2) The lockdown procedures for controlled access construction areas following a security sweep must be designed to:

(i) Deter and detect the introduction of firearms, explosives, incendiary devices, and other items into the controlled access construction area that could later reasonably be directly or indirectly used to commit an act of radiological sabotage; and

(ii) Assure the level of security achieved after completion of the security sweeps is maintained until the operational security plan is implemented.

(3) To achieve the objectives of this section, the licensee's lockdown measures must, at a minimum, include the following performance capabilities:

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(i) Deterrence and detection of unauthorized access of persons, vehicles, or material into a locked-down area;

(ii) Barriers to deter and delay unauthorized penetration attempts;

(iii) Periodic surveillance and observation of activities performed within locked-down areas to detect tampering or degradation;

(iv) Continuous remote monitoring of intrusion detection systems, when implemented;
and

(v) Establishment, implementation, and maintenance of procedures for a temporary modification to portions of the physical barrier or delay systems, including the perimeter security systems, intrusion detection alarms, closed-circuit television, lighting, or other detection or delaying systems. As needed, the licensee shall implement compensatory security measures that provide an equivalent level of protection to the physical protection features being impacted.

(4) Phase 4 Transition completion. Licensees shall discontinue implementation of the requirements of this section after implementation of its operational security program as specified in 10 CFR 73.55(a)(4).

(e) Records. (1) The Commission may inspect, copy, retain, and remove all reports, records, and documents required to be kept by Commission regulations, orders, or license conditions, whether the reports, records, and documents are kept by the licensee or a contractor.

(2) The licensee shall maintain all records required to be kept by Commission regulations, orders, or license conditions, until the Commission terminates the license for which the records were developed, and shall maintain superseded portions of these records for at least three (3) years after the record is superseded, unless otherwise specified by the Commission.

(3) Review and audit reports must be maintained and available for inspection, for a period of three (3) years.

§ 73.58 Safety/security interface requirements for nuclear power reactors.

(a) Each nuclear power reactor licensee with a license issued under part 50 or 52 of this chapter shall comply with the requirements of this section.

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(c) 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, construction, system reconfiguration, access modification or restrictions, and changes to the security plan and its implementation).