

RULEMAKING ISSUE NOTATION VOTE

October 21, 2010

SECY-10-0137

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: PROPOSED RULE: REQUIREMENTS FOR ACCESS AUTHORIZATION
AND PHYSICAL PROTECTION DURING NUCLEAR POWER PLANT
CONSTRUCTION (RIN 3150-AI65)

PURPOSE:

The purpose of this paper is to request Commission approval to publish for public comment a proposed rulemaking that would add requirements related to access authorization and physical protection during construction of new nuclear power plants. This proposed rule would amend Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," and 10 CFR Part 73, "Physical Protection of Plants and Materials."

SUMMARY:

The U.S. Nuclear Regulatory Commission (NRC) staff seeks Commission approval of proposed amendments to 10 CFR Part 73 to add a new § 73.52, "Construction Site Access Authorization and Physical Protection," related to nuclear power plant construction security activities under a construction permit (CP) or a combined license (COL). The staff is proposing to add

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requirements for the implementation of access authorization and physical protection measures; access authorization controls; physical inspections; lockdown measures and procedures for securing the security- and safety-related structures, systems, and components (SSCs); and performance of high-quality security sweeps before the plant's transition into its operational phase. These changes would affect holders of a CP under 10 CFR Part 50 and holders of a COL under 10 CFR Part 52 with nuclear power plants under construction.

BACKGROUND:

Current NRC regulations do not include requirements for access authorization or physical protection at nuclear power plant construction sites before the receipt of nuclear fuel under 10 CFR Part 50 or notice of the Commission's finding under 10 CFR 52.103(g) that the acceptance criteria in the combined license are met. Although licensees may provide industrial or commercial security during construction to reduce commercial risk, the lack of required security measures before receipt of fuel is inconsistent with the potential security risk stemming from malicious activities that could occur during the construction of new nuclear power plants. This omission could result in an inadequate level of assurance of a licensee's ability during construction to deter or detect malicious activities that could adversely affect the safe construction and subsequent operation of security- and safety-related systems and components.

In September 2006, the NRC staff provided the Commission with an information paper describing plans to work with the nuclear power reactor industry to develop appropriate access authorization and physical protection measures for nuclear power plants under construction. These plans included the development of measures designed to deter or detect potential adversaries from gaining site-specific information and to deter malicious acts that could compromise security- and safety-related equipment and components during operation.

After submitting the September 2006 memorandum, the NRC staff held working-level meetings with the industry's New Plants Security Task Force and discussed many issues associated with security at new reactor construction sites. These meetings culminated in the development of Revision 2 of Appendix F, "Security Measures During New Reactor Construction," to Nuclear Energy Institute (NEI) 03-12 (generic power reactor security plan template), issued September 2007. Appendix F presents security measures for the construction phase of a new nuclear power plant, independent of whether the plant is to be constructed within an existing nuclear power plant's owner-controlled area or on an undeveloped or greenfield site, for applicants who voluntarily choose to incorporate these guidelines into their security plans.

In November 2007, the NRC staff requested in SECY-07-0211 that the Commission approve the establishment of construction site personnel access authorization and physical security requirements for holders of a CP under 10 CFR Part 50, of a COL under 10 CFR Part 52, or a limited work authorization.

In January 2008, the Commission issued a staff requirements memorandum (SRM) to SECY-07-0211, approving the NRC staff's proposal to establish physical security and access authorization requirements for new nuclear power reactor sites under construction, consistent with NEI 03-12, Appendix F, Revision 2. In addition, the Commission authorized the NRC staff to continue working with industry to develop alternative measures in lieu of fingerprint submission and to resolve open items related to physical protection. The Commission also

stated that the NRC staff should leave the option of fingerprinting open, as a last resort if alternative measures could not be developed, and should request public comment on the issue of fingerprint submission.

After the January 2008, SRM, the Office of Nuclear Security and Incident Response (NSIR) staff held many working-level meetings with the industry's New Plants Security Task Force to discuss security measures associated with new reactor construction and to resolve the remaining items related to physical security (e.g., personnel and vehicle search, package searches) at nuclear power plant construction sites.

In August 2008, NEI submitted a letter to the Director, NSIR, requesting NRC staff review and endorsement of NEI 03-12, Appendix F, Revision 3. The NSIR staff found the document generally acceptable in terms of access authorization and physical security measures. However, the staff did not agree with NEI about a process for inspecting personnel, vehicles, and material during plant construction.

The NRC staff responded to the August 20, 2008, NEI request in a letter dated November 13, 2008. In this letter, the NRC staff informed NEI that the NRC staff has deferred the review of NEI 03-12, Appendix F and was proceeding to rulemaking.

In August 2009, the NRC found the regulatory basis for proposed rulemaking adequate to begin the proposed rulemaking. The Office of New Reactors assigned a rulemaking project manager, formed a rulemaking working group, and formed a steering committee to provide direction and guidance to the working group.

In an effort to conduct a rulemaking that is transparent and open to stakeholder participation, the staff held a public workshop on March 31, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML101090147), to discuss draft proposed rule text made available to the public. The staff considered feedback given by external stakeholders during this meeting in its further development of the proposed rule. On August 27, 2010, the staff held a second public workshop to discuss the status and schedule of the proposed rulemaking (ADAMS Accession No. ML102440075). The workshop objective was to facilitate improved stakeholder understanding of the substance of the draft proposed rule. NEI and industry workshop participants expressed their appreciation for holding this workshop and providing the opportunity to reflect upon the draft proposed rule.

DISCUSSION:

The requirements for the physical protection measures and the access authorization program for granting individuals unescorted access to protected areas of operating nuclear power plants appear in 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors against Radiological Sabotage." These regulations apply upon the receipt of nuclear fuel onsite within the protected area.

The staff discussed the basis for requiring the implementation of new reactor construction site access authorization controls and physical security measures with industry representatives. Staff considerations included the March 30, 2005, letters to the U.S. Senate and the U.S. House of Representatives in which Chairman Diaz asked, on behalf of the Commission, for legislation to enhance nuclear safety and security by "making it a Federal crime to sabotage commercial

nuclear facilities, fuel, and Commission-designated material or property not previously covered by the sabotage section of the AEA (section 236), and extending [this] coverage to the construction period for all facilities addressed by that section.” The NRC’s Legislative Memorandum attached to that letter stated: “Sabotage during the later stages of construction, particularly during pre-operational testing, is of special concern because of the possibility that it might not be discovered prior to operation, since most of the inspections that could have led to the discovery of the sabotage would have already taken place. Thus, the Commission believes that enacting criminal sanctions to help deter such sabotage is warranted to protect more adequately the public health and safety and the common defense and security.”

Congress enacted the Commission’s proposed changes by including in the EAct an amendment to the AEA that makes the act of committing sabotage against a nuclear power plant under construction a felony. Section 655 of the EAct amended Section 236a of the AEA to read: “Any person who knowingly destroys or causes physical damage to...any production, utilization, waste storage, waste treatment, waste disposal, uranium enrichment, uranium conversion, or nuclear fuel fabrication facility subject to licensing or certification under this Act during construction of the facility, if the destruction or damage caused or attempted to be caused could adversely affect public health and safety during the operation of the facility...or attempts or conspires to do such act, shall be fined not more than \$10,000 or imprisoned for not more than 20 years, or both, and if death results to any person, shall be imprisoned for any term of years or for life.” Congress, aware of the security threat, passed an amendment to the AEA enacting criminal sanctions to help deter this threat because of their belief that new nuclear power plant construction required additional security to protect more adequately the public health and safety and the common defense and security. The NRC supported a number of the act’s provisions and had long requested the provisions on sabotage (Section 655), among others. “These provisions will make an industry that is already well protected even safer from the threats of terrorism and radiological sabotage,” said NRC Chairman Diaz after the bill was signed.” (ADAMS Accession No. ML052200503)

Discussions with terrorist experts confirmed that both domestic and international terrorist groups have targeted, or have expressed the intent to target, nuclear facilities in the United States. These terrorist groups have demonstrated the capacity to perform acts of sabotage and violence capable of destroying property. Some groups are on record as strongly opposing the expansion of the nuclear power industry in the United States.

The primary concern relative to the performance of malicious activities during the new reactor construction period is the ability of potential adversaries to introduce undetected defects into security- or safety-related SSCs or to pre-position construction site restricted items (e.g., unauthorized firearms, explosives, or incendiary devices) that could be used for malicious purposes after the plant is operational.

The staff recognizes that these concerns are partially addressed by many of the required activities conducted by licensees during the plant construction period (e.g., robust designs, safety-related quality assurance programs, pre-operational testing, etc.). NRC oversight activities at construction sites would provide some additional degree of assurance that malicious acts would be detected or deterred. Further, the staff recognizes that industry plans to provide certain industrial security measures at their construction sites to protect their commercial interests. Notwithstanding the above, implementation of these proposed security measures will

result in a robust security program specifically designed to deter and detect malicious acts during new nuclear power plant construction. In addition, implementation of these proposed security measures will enhance NRC and public confidence in the adequacy of the security program at new nuclear power plant sites.

The proposed amendments would result in changes to the following regulations:

- 10 CFR 50.34, “Contents of Applications; Technical Information”
- 10 CFR 50.54, “Conditions of Licenses”
- 10 CFR 52.79, “Contents of Applications; Technical Information in Final Safety Analysis Report”
- 10 CFR 73.1, “Purpose and Scope”
- 10 CFR 73.52, “Construction Site Access Authorization and Physical Protection”
- 10 CFR 73.58, “Safety/Security Interface Requirements for Nuclear Power Reactors”

These proposed regulations would require licensees to implement physical protection measures, access authorization controls, physical inspections, the performance of high-quality security sweeps, and lockdown measures and procedures for securing the security- and safety-related SSCs before the nuclear power plant transitions to its operational phase. Licensees would be required to implement access authorization and physical security measures before the scheduled onsite in-place setting, installation, or erection of security- or safety-related SSCs in the areas in which they will be permanently operated.

The rule would also require licensees to perform the following security inspection activities before implementing the required lockdown procedures:

- Conduct lockdown measures and procedures for securing the security- and safety-related SSCs before the plant enters its operational phase.
- Perform high-quality security sweeps before the licensed material arrives and the nuclear power plant transitions to its operational phase.

Once this rule becomes effective, each CP and COL holder would be required to submit a construction security plan and the proposed schedule for implementing the construction security program for NRC review and approval. To allow for the planning of NRC inspections, licensees would need to notify the agency by letter at least 60 days before the construction security plan becomes effective.

The following sections describe each of the proposed security features included in the proposed rule.

Construction Security Plan

The proposed amendments would require holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 to develop and submit construction security plans to the NRC for approval. The construction security plan would describe how the program meets the construction security requirements proposed under 10 CFR 73.52 and describe the transition plan to the physical security plan required under 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors against Radiological Sabotage." These proposed requirements would be incorporated into 10 CFR 50.34 for CP holders and 10 CFR 52.79 for COL holders.

The proposed amendments would ensure that the effectiveness of the construction security plan would be maintained, changes to the approved construction security plan would be properly evaluated, and any change that reduces the effectiveness of the plan would be reviewed by the NRC before implementation. These proposed amendments would be incorporated into 10 CFR 50.54(ii).

This proposed provision would also require changes to docketed applications for new nuclear power reactors. These applications would be in various phases of NRC staff review—as far along as the final hearing phase—when the Commission promulgates a final rule. The staff has determined that any adverse effects of these changes on COL applications, as well as on existing holders of CPs or COLs, can be managed through close communication with these applicants and holders, and through timely submission and implementation of their construction security plan. There are several possible options for addressing the situation in which the final rule becomes effective just before a decision on COL issuance. The first is to encourage applicants to voluntarily submit its construction security plan and implementation schedule before the effective date of the rule. Alternatively, the final rule effective date can be set to minimize impact on near-term COLs, or a COL applicant can request an extension for compliance with the rule and upon a demonstration of good cause within the request, the extension request could be granted. The least attractive option is for the applicant to submit an application amendment in advance of its COL issuance, which may cause a potential delay in the licensing decision. However, these various options need not be resolved until the final rule stage.

Reviewing Officials

As noted below, the holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 would be required to verify the identity of individuals before granting them access to areas with security- or safety-related SSCs. The proposed amendments would require holders of CPs or COLs to designate one or more individuals to review and evaluate all data collected about an individual to determine whether that individual is trustworthy and reliable.

Worker Access Screening

The proposed amendments would require holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 to verify the identity of individuals before granting them access to areas with security- and safety-related SSCs. The proposed amendments would require holders of CPs or COLs to determine with high assurance that the individual is who he or she

claims to be before granting construction site access, and biennially thereafter. Information compiled to determine high assurance would include information presented by the individual as well as other data, such as the results of a demographic check performed by the licensee. The demographic check would require, at a minimum, validating an individual's identity by evaluating accumulated information developed from other background investigation sources (e.g., previous employment records, personal references).

The regulation would require licensees to access information from reliable sources to verify that the personal identifying information provided by the individual is authentic and accurate. Licensees could achieve this verification through a variety of means, including, but not limited to, accessing information from databases that are maintained by the Federal Government, or evaluating accumulated information, such as comparing a social security number provided by the individual to the social security number included in the person's employment history questionnaire. Verification could also be achieved through other sources that would allow the reviewing official to evaluate the authenticity of the information provided and have high assurance that the person is who he or she claims to be. These proposed amendments would be incorporated into 10 CFR 73.52(d)(1)(ii).

Construction Worker Observation Policy

The proposed amendment would require holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 to develop and implement a construction worker observation policy. This policy would apply to all individuals on site during new nuclear plant construction with unfettered access to site areas containing installed security- or safety-related systems and components. This proposed requirement supplements the requirements of the observation program under 10 CFR Part 26, "Fitness for Duty Programs." Deterring, detecting, and evaluating behavior changes to determine whether they may lead to acts detrimental to public health and safety is important. The behavioral observation element of the fitness-for-duty program required under 10 CFR 26.33, "Behavioral Observation," addresses this objective from a focus on impairment of drugs or alcohol. This proposed amendment would focus on detecting and communicating behavior changes that, if left unattended, could lead to detrimental acts that may have an adverse impact on the safety and security of the construction site or public health and safety or the common defense and security once the plant has transitioned into the operational phase. These proposed amendments would be incorporated into 10 CFR 73.52(d)(1)(ii).

Site Badge Program

The proposed amendments would create a new provision, 10 CFR 73.52(d)(1)(ii), that would require holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 to establish a construction site badge program. Construction personnel or visitors would have to display badges at all times while onsite to identify themselves as personnel granted construction site access or visitor status.

Visitor Register

The proposed amendments would create a new provision, 10 CFR 73.52(d)(1)(ii)(C), that would require all visitors to be registered and be issued a visitor badge before entry into the controlled access construction area. Licensees must provide visitor escorts to oversee visitor actions and

to deter and detect any behavior not readily acceptable as normal behavior in common, everyday work practices.

Barrier

The proposed amendments would require holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 to erect barriers that would clearly separate the controlled access construction area containing security- and safety-related SSCs from the surrounding area and would serve as a channeling barrier to facilitate control of access. These proposed amendments would be incorporated into 10 CFR 73.52(d)(2)(i)(C).

Construction Site Security Force

The proposed amendments would establish a construction site security organization to implement the construction security program. These proposed amendments would be incorporated into 10 CFR 73.52(d)(2)(i)(D).

Construction Access Portal Inspections

The proposed amendments would require inspection of a subset of the personnel, vehicles, and construction material passing through an access portal to deter and detect the introduction of construction site restricted items. The construction security plan would document the inspection criteria used for randomness, frequency, and percent of personnel, vehicles, and construction material searched. These proposed amendments would be incorporated into 10 CFR 73.52(d)(2)(iii).

Security Sweeps and Lockdown

The proposed amendments would require holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 to meet physical security performance requirements for sweeping and securing plant areas containing security- and safety-related SSCs. These high-quality security sweeps would provide assurance that security- and safety-related SSCs, and the immediate areas are free of construction site restricted items. Once the sweeps have been completed, these areas would be designated secure areas and would have to remain so until the operational security program required under 10 CFR 73.55 is implemented.

Notification Letters

The proposed amendments would require holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 to provide written notification at least 60 days before the construction security plan becomes effective and before the scheduled implementation of lockdown procedures, including the commencement of security sweeps. The two proposed one-time reporting requirements would allow the NRC inspection staff to discuss the licensee plans and determine if the staff wants to observe any of the upcoming activities for the purpose of making a future staff determination or planning security inspection activities. These proposed amendments would be incorporated into 10 CFR 73.52(f)(1).

Reporting of Detected Malicious Acts

The proposed amendments would require holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 to notify the NRC within 24 hours after identification of an event and determination that a malicious act has occurred. This ensures that the Commission would receive timely notification about malicious acts at nuclear power plant construction sites and that the Commission can initiate the appropriate NRC response, notify other licensees as appropriate, and respond to inquiries from the public, media outlets, and its Federal partners. Additionally, this provision would allow the NRC staff to further evaluate, trend, and share this information with the Commission's Federal, State, and local government partners, including, but not limited to, the Department of Homeland Security, the Federal Bureau of Investigations, and local law enforcement. These proposed requirements would be incorporated into 10 CFR 73.52(f)(4).

Additional Items for Commission Consideration

In January 2008, the Commission issued a staff requirements memorandum (SRM) to SECY-07-0211, approving the NRC staff's proposal to establish physical security and access authorization requirements for new nuclear power reactor sites under construction, consistent with NEI 03-12, Appendix F, Revision 2. In addition, the Commission authorized the NRC staff to continue working with industry to develop alternative measures in lieu of fingerprint submission and to resolve open items related to physical protection. The Commission also stated that the NRC staff should leave the option of fingerprinting open, if alternative measures could not be developed, and should request public comment on the issue of fingerprint submission. At this time, alternative measures to fingerprinting have been discussed openly during public meetings. Although no other biometric means provide the scientific accuracy of true identification that recordable fingerprints do, the NRC's fingerprinting authority is limited by Section 652 of the EPA Act, amended by Section 149 of the AEA, to individuals who have "unescorted access to...radioactive material or other property subject to regulation by the Commission that the Commission determines to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and background checks." Should the Commission make this determination, then by statute all personnel who have unfettered access to the designated property must be fingerprinted. As an alternative, the proposed rule relies upon demographic data (name, date of birth, address, etc.) to establish true identity. The demographic data for all construction site personnel would be submitted to the Terrorist Screening Center prior to their being employed at a construction site. The staff believes this will help identify any personnel associated with terrorist activities. These results will be reviewed by a licensee reviewing official.

The staff believes that it is constructive and worthwhile for the Commission to request public comment on whether additional investigatory elements should be required for worker access to nuclear power plant construction sites. The detailed questions provided in the enclosed draft proposed rule request public comment on whether requiring fingerprint-based criminal record checks consistent with the definition of background check in 10 CFR 73.2, "Definitions," would provide the reviewing official with important information to make an informed decision on the trustworthiness and reliability of the individual before granting construction site access. This section also requests input on access controls, other programs and controls that could be relied upon, the appropriate transition points for program initiation, and the estimated cost to implement the proposed construction security plan. On the basis of stakeholder feedback, the

NRC would decide whether to revise the access authorization and physical protection requirements in the final rulemaking.

The staff considered the need for a cyber security component in the proposed 10 CFR 73.52, "Construction Site Access Authorization and Physical Protection," rulemaking and concluded that the applicant would already be required to implement the protective measures and oversight requirements for cyber security under 10 CFR 73.54, "Protection of Digital Computer and Communication Systems and Networks." Each CP or COL applicant must submit a cyber security plan. The requirements outlined in 10 CFR 73.54 must be completed prior to the loading of fuel in the protected area of a nuclear power plant as required under 10 CFR 73.55. The staff believes that the applicants' implementation of the requirements under 10 CFR 73.55 and 10 CFR 73.54 would address cyber security risks and vulnerabilities.

Guidance Documents

The NRC staff will publish draft guidance documents for public comment in conjunction with the publication of the proposed rule. The NRC will consider comments on the proposed guidance in the development of the final guidance documents. The staff intends to keep nuclear power reactor license applicants, holders of CPs under 10 CFR Part 50, and holders of COLs under 10 CFR Part 52 informed during the development of the associated implementation guidance by providing notice of any public meetings and by posting draft implementing guidance on the NRC Web site.

COMMITMENT:

The staff plans to publish this proposed rule in the *Federal Register* in January 2011. After consideration of public comments, the staff plans to submit the final rule to the Commission for consideration in October 2011. The staff plans to issue the final guidance document at or about the time the rule is made effective.

RECOMMENDATIONS:

The staff recommends that the Commission take the following actions:

1. Approve for publication in the *Federal Register* the enclosed notice of proposed rulemaking (Enclosure 1).
2. Take note of the following:
 - a. The proposed rule will be published in the *Federal Register* for a 75-day comment period (Enclosure 1).
 - b. A draft regulatory and backfit analysis has been prepared for this proposed rulemaking (Enclosure 2).
 - c. A draft environmental assessment and finding of no significant impact has been prepared (Enclosure 3).
 - d. The Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification and the reasons for it, as required by the Regulatory Flexibility Act (5 U.S.C. 605(b)).

- e. The appropriate Congressional committees will be informed.
- f. The Office of Public Affairs will issue a press release when the proposed rulemaking is filed with the Office of the Federal Register.
- g. Review by the Office of Management and Budget (OMB) is required. The staff will submit a clearance package to OMB electronically on or immediately after the date the proposed rule is published in the *Federal Register*.

RESOURCES:

Estimated resource needs of 1.7 FTE and \$238,000 in contractor support are included in the FY 2011 President's budget as identified below. FY 2012 resources are included in the budget request.

OFFICE	FY 2011	FY 2012
Office of New Reactors	0.8 FTE and \$160K	0.2 FTE and \$160K
Office of Nuclear Security and Incident Response	0.5 FTE and \$78K	0.5 FTE and \$30K
Office of Nuclear Reactor Regulation	0.1 FTE	
Office of the General Counsel	0.1 FTE	0.05 FTE
Office of Administration	0.1 FTE	
Office of Information Services	0.1 FTE	
Total	1.7 FTE and \$238K	0.75 FTE and \$190K

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection. The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections. The Office of the Advisory Committee on Reactor Safeguards has deferred its review of this rulemaking until the final rule stage. The rule suggests changes in information collection requirements that must be submitted to OMB on or immediately after the date the proposed rule is published in the *Federal Register*.

/RA by Martin J. Virgilio for/

R. W. Borchardt
Executive Director
for Operations

Enclosures:

1. *Federal Register* Notice
2. Draft Regulatory and Backfit Analysis
3. Draft Environmental Assessment

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 50, 52, and 73

RIN 3150-AI65

NRC-2009-0195

**Requirements for Access Authorization and Physical Protection
During Nuclear Power Plant Construction**

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its regulations to add new security requirements during construction of new nuclear power plants under a construction permit or a combined license. Specifically, the NRC is proposing new provisions that apply during nuclear power plant construction that would require physical protection measures; access authorization controls; physical inspections; performance of high-quality security sweeps; and lockdown measures and procedures for securing the security- and safety-related structures, systems, and components (SSCs) before entering the operational phase of the facility.

DATES: Submit comments on this proposed rule by [**INSERT DATE 75 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER**]. Submit comments on the information collection aspects of this proposed rule by [**INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER**]. Comments received after these dates will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after these dates.

ADDRESSES: Please include Docket ID **NRC-2009-0195** in the subject line of your comments.

For instructions on submitting comments and accessing documents related to this action, see Section I, "Submitting comments and Accessing information" in the SUPPLEMENTARY

INFORMATION section of this document. You may submit comments by any one of the following methods.

Federal Rulemaking Web site: Go to <http://www.regulations.gov> and search for documents filed under Docket ID **NRC-2009-0195**. Address questions about NRC dockets to Carol Gallagher 301-492-3668; email Carol.Gallagher@nrc.gov.

Mail comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.

E-mail comments to: Rulemaking.Comments@nrc.gov. If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at 301-415-1677.

Hand deliver comments to: 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 a.m. and 4:15 p.m. Federal workdays. (Telephone 301-415-1677).

Fax comments to: Secretary, U.S. Nuclear Regulatory Commission at 301-415-1101.

FOR FURTHER INFORMATION CONTACT: Mr. R. Frederick Schofer, Office of New Reactors, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone 301-415-5682; e-mail: Fred.Schofer@nrc.gov or Mr. Brad Baxter, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone 301-415-6742, e-mail at Brad.Baxter@nrc.gov.

SUPPLEMENTARY INFORMATION:

- I. Submitting Comments and Accessing Information
- II. Background
- III. Discussion
- IV. Section-by-Section Analysis
- V. Guidance
- VI. Specific Request for Comments
- VII. Availability of Documents
- VIII. Plain Language
- IX. Agreement State Compatibility
- X. Voluntary Consensus Standards
- XI. Finding of No Significant Environmental Impact: Environmental Assessment
- XII. Paperwork Reduction Act Statement
- XIII. Regulatory Analysis
- XIV. Regulatory Flexibility Act Certification
- XV. Backfit Analysis

I. Submitting Comments and Accessing Information

Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal rulemaking Web site <http://www.regulations.gov>. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed.

The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information, and therefore, they should not include any information in their comments that they do not want publicly disclosed.

You can access publicly available documents related to this document using the following methods:

NRC's Public Document Room (PDR): The public may examine and have copied for a fee publicly available documents at the NRC's PDR, Room O-1F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland.

NRC's Agencywide Documents Access and Management System (ADAMS):

Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this page, the public can gain entry into ADAMS, which provides text and image files of NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC's PDR reference staff at 1-800-397-4209, or 301-415-4737, or by e-mail to PDR.Resource@nrc.gov.

Federal Rulemaking Web site: Public comments and supporting materials related to this proposed rule can be found at <http://www.regulations.gov> by searching on Docket ID:

NRC-2010-0195.

You may submit comments on the information collections by the methods indicated in the Paperwork Reduction Act Statement.

II. Background

Current NRC regulations do not include requirements for access authorization or physical protection measures at nuclear power plant construction sites before the receipt of nuclear fuel. Although construction permit holders and combined licensees provide security during construction to reduce their commercial risk, the lack of required security measures is inconsistent with the potential security risk stemming from malicious activities that could occur during the construction of new nuclear power plants. This omission could result in an inadequate level of assurance of a licensee's ability during construction to deter or detect

malicious acts that could adversely affect the safe construction and subsequent operation of security- and safety-related systems and components at commercial nuclear power plants licensed and regulated by the NRC.

The objective for this rulemaking is to establish minimum access and physical protection program requirements at nuclear power plant construction sites to deter and detect malicious acts during nuclear power plant construction that could later be used to cause or facilitate a radiological sabotage event during plant operation.

The primary concern relative to malicious activities during the new nuclear power reactor construction period is the ability for potential adversaries to introduce undetected defects into security- or safety-related systems or components or to pre-position construction site restricted items (e.g., unauthorized firearms, explosives, incendiary devices, and other materials) that could be used to commit or facilitate malicious acts after the plant is operational.

On September 7, 2006, the NRC staff provided the Commission with an information paper describing plans to work with the nuclear power reactor industry to develop appropriate access authorization and physical protection measures for nuclear power plants under construction. These plans included the development of measures designed to deter or detect potential adversaries from gaining site-specific information and to deter malicious acts that could compromise security- and safety-related equipment and components during operation.

As a result of the September 7, 2006, information paper, the NRC staff held public meetings with the industry's New Plants Security Task Force and discussed many issues associated with security at reactor construction sites. These meetings culminated in the development of Revision 2 of Appendix F, "Security Measures During New Reactor Construction," to Nuclear Energy Institute (NEI) 03-12 (generic power reactor security plan template), issued in September 2007. Appendix F presents security measures for the construction phase of a new nuclear power plant, independent of whether the plant is to be

constructed within an existing nuclear power plant's owner-controlled area or on an undeveloped or greenfield site, for applicants who voluntarily choose to incorporate these guidelines into their security plans.

On November 30, 2007, the NRC staff requested in an information paper that the Commission approve the establishment of construction site personnel access authorization and physical security requirements for holders of a combined license (COL), construction permit (CP), or limited work authorization (LWA).

On January 23, 2008, the Commission issued a staff requirements memorandum (SRM) to SECY-07-0211, approving the NRC staff proposal to establish physical security and access authorization requirements for new nuclear power reactor sites under construction, consistent with NEI 03-12, Appendix F. In addition, the Commission authorized the NRC staff to continue working with industry to develop alternative measures in lieu of fingerprint submission and to resolve open items related to physical protection. The Commission also stated that the NRC staff should leave the option of fingerprinting open, as a last resort if alternative measures could not be developed, and should request public comment on the issue of fingerprint submission. The Commission also authorized the NRC staff to pursue access authorization and physical protection rulemaking that would apply to nuclear power plant construction sites.

On March 16, 2010, the staff released draft proposed rule language for "Access Authorization and Physical Security for Nuclear Power Plant Construction" under ADAMS Accession No. ML100750461. This was followed up with a public meeting on March 31, 2010, with stakeholders to exchange views and information regarding the goals and objectives contained in the proposed rule text. Feedback received during the March 2010 public meeting included revising the proposed rule to include performance based versus specific requirements and simplifying the rule text with clear objectives and framework. A summary of the public meeting is available in ADAMS under Accession No. ML101090147. On August 27, 2010, the

staff held a second public workshop to discuss the status and schedule of the proposed rulemaking. The workshop objective was to facilitate improved stakeholder understanding of the proposed rule so that stakeholders could provide informed comments on the proposed rule during the public comment period. A summary of the public meeting is available in ADAMS under Accession No. ML102440075.

The NRC believes that this proposed rulemaking would substantially enhance security at nuclear power plant construction sites by providing measures to deter and detect malicious acts during construction that could have a latent or delayed effect and later cause a radiological sabotage event during plant operation.

III. Discussion

The NRC is proposing to amend its current security regulations to add new security requirements pertaining to new nuclear power reactors under construction. Section 73.52 establishes the requirements for development, implementation, and maintenance of an effective construction site access authorization and physical protection program through performance-based criteria that the licensee must achieve.

The proposed performance requirements contained in § 73.52 are the minimum requirements for an access authorization and physical protection program at new nuclear power plant under construction. The NRC believes that these requirements would provide an acceptable level of protection if effectively implemented.

The proposed requirements focus on the establishment of access authorization and physical protection measures to deter and detect the introduction of firearms, explosives, or incendiary devices that could be used to commit, or contribute to, a malicious act. These security measures shall include, at a minimum, the performance of visual and physical inspections of personnel, vehicles, and material which enter the controlled access construction area and the detection of malicious acts through security sweeps and lockdown procedures.

The following paragraphs describe the features and reasons for the proposed security features included in the proposed rule.

A. Construction Security Plan

Holders of construction permits (CPs) under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, “Domestic Licensing of Production and Utilization Facilities,” and holders of combined licenses (COLs) under 10 CFR Part 52 will be required to develop and submit to the NRC for approval construction security plans. The construction security plan would describe how the program meets the construction security requirements proposed under the newly proposed 10 CFR 73.52 and describe the transition plan to the physical security plan required under 10 CFR 73.55, “Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors against Radiological Sabotage.” These proposed requirements would be incorporated into 10 CFR 50.34 for CP holders and 10 CFR 52.79 for COL holders.

The NRC expects that the effectiveness of the construction security plan would be maintained, changes to the approved construction security plan would be properly evaluated, and any change that reduces the effectiveness of the plan would be reviewed by the NRC before implementation.

Each licensee under amended § 50.54(ii) must revise its site-specific construction security plan, whenever necessary, to ensure that site conditions and security measures adequately address and describe how to deter and detect malicious acts. In this context, the phrase, “malicious acts,” refers to the destruction, tampering with, or causing physical damage to nuclear plant structures, systems, or components during construction, or attempted or successful introduction of restricted items (e.g., unauthorized firearms, explosives, and incendiary devices) onto the construction site.

A holder of a construction permit under Part 50 or a combined license under Part 52 would be required to follow and maintain the effectiveness of its construction security plan, as

originally approved, until the facility's transition to the requirements of the required physical security plan under § 73.55 before operation. While the construction security plan is in effect, the NRC would expect licensees to identify conditions and situations which could reduce the effectiveness of its plan, and to take corrective and/or compensatory actions to restore and maintain the requisite effectiveness. However, the construction security plan as submitted by the construction permit holder or combined licensee and approved by the Commission shall not be changed in a manner which would result in a decrease in the effectiveness of the approved construction security plan. The phrase "decrease in effectiveness" would be an evaluation that would differentiate between changes that the licensee would be allowed to make without prior NRC approval and those that would require prior NRC approval. A determination that a change results in a reduction in effectiveness does not imply that the licensee could no longer implement its plan and provide adequate measures for the protection of the public. The NRC may approve a proposed construction security plan change that the licensee determined to be a reduction in effectiveness, if the NRC determines that the construction security plan, as modified, would continue to meet the performance objectives of § 73.52(c) and would continue to provide assurance that malicious acts during construction cannot later reasonably result directly or indirectly in radiological sabotage as defined by § 73.2, "Definitions."

If the licensee desires to change the construction security plan in a manner that may result in a decrease in the effectiveness of the approved construction security plan, the licensee shall submit a license amendment request for NRC review in accordance with the requirements set forth in § 50.90. In addition to satisfying the filing requirements for a license amendment request in § 50.90, the proposed § 50.54(ii)(1) request would include all construction security plan pages affected by the change, a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the licensee's construction security plan, as revised, will continue to meet the requirements of proposed § 73.52.

The NRC would review the amendment application to make a no significant hazards consideration determination and to determine if the construction security plan, as modified, is a reduction in effectiveness under § 50.54(ii)(1) and continues to meet the requirements in § 73.52.

An essential element of the construction security plan is the ability for the licensee to demonstrate that all construction site access authorization and physical protection program components and elements accomplish their intended functions, such as controlling access to the controlled access area. The Commission's expectation is that, upon request, each licensee will demonstrate the effectiveness of any individual or combination of components or elements of the construction site access authorization and physical protection program.

The NRC staff considered that construction permit holders and combined licensees, as part of a risk management program, may implement a construction-related, industrial security program predicated on such drivers as insurance, banking, safety, and common risk, asset protection and loss prevention policies common in the course of conducting business. The NRC staff considered that these programs may serve to complement, but not replace, the requirements proposed under this section.

The NRC staff also considered that the requirements under § 73.52 are not intended to replace, or undermine quality assurance/control programs that are currently required by regulation but are intended to be complementary to one another consistent with NRC safety and security interface requirements under § 73.58.

B. Reviewing Officials

The proposed regulation requires each licensee to designate one or more persons as a reviewing official. This official is responsible for reviewing and evaluating information gathered by the licensee about personnel who are applying for unescorted access authorization and for determining whether those individuals meet the licensee's implanting criteria for determining

trustworthiness and reliability, certify, grant, deny, unfavorably terminate, or maintain an individual's unescorted access based on an evaluation of all the relevant information required under 10 CFR 73.52(1)(ii)(A) and (B). This phrase, "trustworthy and reliable," means that an individual possesses those characteristics that enable the reviewing official to determine, after considering all relevant information, that the individual would be considered dependable in judgment, character, and performance.

The NRC expects that each licensee's construction security plan will specify personnel access measures for the reviewing official's pre-access screening checks, initial access, construction access maintenance, construction worker observation, and site badging. The reviewing official must make a positive finding of trustworthiness and reliability before granting an individual access to or maintaining an individual's access to the controlled access construction area. However, if a construction permit holder or combined licensee discloses Safeguards Information (including Safeguards Information designated as Safeguards Information – Modified Handling) to that individual, a determination of trustworthiness and reliability for that purpose must also include a background check as described in § 73.2 and meet the requirements of §§ 73.21, and 73.22.

C. Worker Access Screening

The reviewing official(s) would verify the identity of individuals before granting them access to controlled access construction areas. The proposed amendments would require the reviewing official to determine with high assurance that the individual is who he or she claims to be before granting construction site access, and semiannually thereafter. Information compiled to determine high assurance would include information presented by the individual as well as other data, such as the results of a demographic check performed by the licensee. The demographic check would require, at a minimum, validating an individual's identity by evaluating accumulated information developed from other background investigation sources (e.g., previous

employment records, and personal references). Each of these verification measures are discussed below.

Section 73.52(d)(1)(ii)(A)(1)(i) requires the licensee's reviewing official to verify an individual's identity before granting access to the controlled access construction area. At a minimum, this would require the validation of an individual's identity by evaluating an accumulation of information developed from other background investigation sources (e.g., previous employment records, personal references). The term, "verify" would be used to indicate that licensees are required to take steps to determine that the Personal Identifying Information the individual has provided is authentic and accurate.

This verification could be achieved through a variety of means, including, but not limited to, accessing information from databases through the NRC that are maintained by the Federal Government, or evaluating an accumulation of information, such as comparing a social security number the individual provided to the social security number(s) included in the person's employment history questionnaire or other sources that would allow the reviewing official to evaluate the information in total in order to verify that the person is in fact the individual he or she claims to be.

The NRC is considering whether to use fingerprinting as a method of determining true identity during the background investigation process. However, the staff has left this option open to request public comment on the technical and policy issues associated with the use of fingerprinting. This specific request for comments is discussed further in Section V, "Specific Request for Comments" of this document.

Section 73.52(d)(1)(ii)(A)(1)(ii) requires the licensee to conduct a demographic data check before a reviewing official can grant an individual access to the controlled access construction area. The demographic data (e.g., name, date of birth, address) would be submitted to the Terrorist Screening Center (TSC) via the NRC through currently established

electronic means to provide reasonable assurance that the individuals submitted are not known or suspected terrorists, or connected to terrorist activities. Further, the NRC would require construction permit holders and combined licensees to submit demographic data information on personnel who maintain access on a semiannual basis.

D. Construction Worker Observation Policy

Under this proposed rule, holders of CPs under 10 CFR Part 50 and holders of COLs under 10 CFR Part 52 would develop and implement a construction worker observation policy. This proposed requirement supplements the requirements of the observation program under 10 CFR Part 26, "Fitness for Duty Programs." The NRC believes that deterring, detecting, and evaluating behavior changes to determine whether they may lead to acts detrimental to public health and safety is important. The behavioral observation element of the fitness-for-duty program required under 10 CFR 26.33, "Behavioral Observation," addresses this objective from a focus on impairment due to drugs or alcohol. This proposed amendment would focus on detecting and communicating behavior changes that, if left unattended, could lead to detrimental acts that may have an adverse impact on the safety and security of the construction site or public health and safety or the common defense and security once the plant has transitioned into the operational phase. These proposed amendments would be incorporated into 10 CFR 73.52(d)(1)(ii)

The construction worker observation policy should be clearly written so that personnel subject to these requirements understand their duties and responsibilities to observe and report behavior out of the norm of normal business practices, or behaviors that left unattended could pose a threat to other personnel, self, or to a greater degree the safety operation at the construction site. The NRC believes that all covered individuals should acknowledge by their signature their responsibilities to implement these requirements. The NRC expects that reports documenting any concerns arising from behavioral observation will be evaluated by the

reviewing official(s). The reviewing official may seek additional information from the individual's supervisor, Human Resources Department and any other relevant sources prior to making a final evaluation and determination to maintain, administratively withdraw, or unfavorably terminate the reported individual's access status.

Records documenting the construction worker observation policy are required to be available at the plant site for NRC review. The records retention requirement is a standard administrative provision that is used in all other parts of 10 CFR that contain substantive requirements applicable to construction permit holders and combined licensees.

E. Barriers

Barriers are an important component of deterrence and are necessary to maintain a clear separation of the controlled access construction area occupied by security- and safety-related SSCs from the surrounding area and as a channeling barrier to facilitate the conduct of the access control and search components of this section. Each licensee should design, install, and maintain a barrier to demarcate its boundaries for the entire construction site or for security- or safety-related SSCs based on the licensee's need as determined through a site-specific analysis. This barrier should be located and designed to deter those seeking to carry out malicious acts or other activities that could compromise the safety of construction or the subsequent operation of security- and safety-related SSCs.

Construction permit holders and combined licensees under proposed § 73.52(d)(2)(i)(C) would erect appropriately constructed barriers that facilitate effective implementation of the access control requirements. The NRC does not intend that this construction site security barrier be equal to the barriers defined in § 73.2 and stipulated under § 73.55. However, the NRC staff does expect the barrier will provide deterrence consistent with the licensee's site-specific analysis and construction security plan.

F. Construction Site Security Force

The Commission's expectation is that licensees will maintain a security organization to protect against malicious acts during construction and implement their construction security program. The security organization will include a management system to oversee the construction site access authorization and physical protection program as needed to establish, revise, and monitor the programs, plans, training, and procedures used to implement the construction site access authorization and physical protection program. The licensee's security organizational structure must be documented and written procedures established that describe the duties and responsibilities assigned to each position or member within the security organization, such as security managers, security officers, and support personnel, along with their roles in effectively implementing the NRC-approved construction security plan. In general, the roles, duties, and responsibilities of members of the security organization include, but are not limited to, the performance of security patrols; surveillance; access controls; searches; escorts; recordkeeping; and assessment of security incidents.

Section 73.52(d)(2)(i)(D) would establish criteria for the construction site security organization.

G. Construction Access Search Program

The NRC believes that periodic surveillance provides an appropriate level of deterrence and detection of malicious acts during construction activities. The NRC recognizes that licensees routinely engage in other activities that can deter and detect malicious acts. Therefore, the NRC encourages the development of construction security plans that use appropriate aspects of quality assurance (e.g., receipt inspections; quality assurance inspections; procurement) and design acceptance programs (e.g., inspection, tests, analyses, and acceptance criteria (ITAAC) program; pre-operational testing program) that the construction permit holder or combined licensee are required to perform in conjunction with the newly

proposed physical protection requirements (e.g., physical searches, security sweeps) to establish a comprehensive deterrent to malicious acts or the introduction of construction site restricted items during nuclear power plant construction. The term, “construction site restricted items,” refers to material which could be used to conduct site surveillance that could support future malicious acts, or firearms, explosives, or incendiary devices that may be carried or concealed by personnel, packages, materials or vehicles and could be used to commit radiological sabotage after the implementation of the operational security program.

Each of the programs identified below provides a layer of deterrence and/or detection of malicious acts contributing to the achievement of the performance objectives under 10 CFR 73.52.

Receipt inspection program – As stipulated in 10 CFR Part 50, Appendix B, licensees are required to implement a receipt inspection program which serves to control materials, parts, or components which do not conform to requirements to prevent their inadvertent use or installation. These measures provide a layer of deterrence and/or detection of malicious acts through the identification, documentation, segregation, disposition, and notification to affected organizations of nonconforming items.

Quality assurance program – As stipulated in 10 CFR Part 50, Appendix B, licensees are required to implement a quality assurance program comprising all those planned and systematic actions necessary to provide adequate confidence that safety-related SSCs will perform satisfactorily in service. These quality assurance measures provides a layer of deterrence and/or detection of malicious acts by assuring that the physical characteristics of a material, structure, component, or system meet predetermined quality requirements.

Procurement: Control of Purchased Material, Equipment, and Services – As stipulated in 10 CFR Part 50, Appendix B, licensees are required to implement measures to assure that purchased material, equipment, and services, whether purchased directly or through contractors,

vendors, and subcontractors, conform to the procurement documents. These measures provide a layer of deterrence and/or detection of malicious acts by establishing source evaluation and selection, objective evidence of quality furnished by the contractor, vendor, or subcontractor, inspection at the contractor, vendor, or subcontractor source, and examination of products upon delivery.

ITAAC program – The overall review approach ensures that the complete facility is verified and that the ITAAC are necessary and sufficient to verify conformance with the applicable regulations (§ 52.97(b)). These measures provide a layer of deterrence and/or detection of malicious acts by requiring that inspections, tests, and analyses are performed, which are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the plant is built and should operate in accordance with the design certification.

Pre-operational testing program – As stipulated in 10 CFR Part 50, Appendix B, licensees are required to implement a test program to assure that all testing required to demonstrate that SSCs will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. The pre-operational testing program provides a layer of deterrence and/or detection of malicious acts by establishing appropriate, proof tests before installation, preoperational tests, and operational tests for assuring that the final as-built facility performs satisfactorily in service.

Assessment and reporting may require the licensee security personnel to notify and establish communications with security and/or management to keep them aware of potential malicious actions and emergency conditions related to the controlled access construction area. Security and/or management must be responsible for evaluating the information and determining courses of action related to the overall protection of safety and security related SSCs.

Section 73.52(d)(2)(iii) would establish the measures that must be met before personnel, vehicles, and material are granted access to the controlled access construction area. Licensee procedures, criteria, and methods must deter the introduction of construction site restricted items and/or validating the absence of construction site restricted items for the area in which the search is conducted through an inspection of a subset of the construction material passing through this access portal. The approved site-specific construction security plan should establish the criteria regarding randomness, frequency, and percent of personnel, vehicles, and construction material searched during the inspection process. Personnel who perform search functions should be trained to perform such duties.

H. Security Sweeps and Lockdowns

Section 73.52(e)(2) would establish the performance based requirement for lockdown that must be accounted for in the construction security plan. The NRC believes that an approved construction security plan, when properly implemented, will provide adequate assurance for detecting unauthorized access by persons, vehicles, or material into the controlled access construction area and locked down areas.

I. Notification Letters

Section 73.52(f)(i) would require construction permit holders and combined licensees to notify the NRC before the occurrence of identified construction security plan triggering events. The NRC is proposing that the notification be made at least 60 days before each of the following events:

- The scheduled onsite in-place setting, installing, or erecting of security- and safety-related systems or components where they will be operated; and
- The scheduled implementation of lockdown procedures including the commencement of security sweeps.

The information provided in the notification should be at a level of detail to allow NRC to plan for performing construction site security inspections.

J. Reporting of Detected Malicious Acts

The NRC believes the licensee should notify the NRC of any detected malicious acts. The licensee shall make this notification by e-mail to hoo.hoc@nrc.gov, which is the preferred method of notification, by facsimile to the NRC Operations Center at 301-816-5151, or by telephone at 301-816-5100 within 24 hours after the licensee assessment and determination that any person knowingly or willingly destroys, tampers with, or causes physical damage to a nuclear plant structures, systems, or components during construction; attempts or succeeds in bringing unauthorized firearms, explosives, incendiary devices or construction site restricted items onto the construction site or; trespasses, alters, or criminally damages barriers required under § 73.52(d)(2).

Notifications made to the NRC Operations Center under § 73.52(f)(4) should clearly indicate that they are being submitted under § 73.52(f)(4) and include:

- Name, address, telephone number, and title or position within licensee organization of individual or individuals informing the Commission.
- Identification of the facility reporting the confirmed malicious act.
- The SSCs affected, the nature of the malicious act, when the malicious act occurred, and the circumstances that led to its detection.
- The actions taken when the malicious act was discovered.
- What corrective actions are planned.

This proposed requirement assures that the Commission is informed regarding malicious acts and that the Commission can initiate the appropriate NRC response, notify other licensees, as appropriate, and respond to inquiries from the public, media outlets, and its federal partners. Additionally, the requirement allows the NRC staff to further evaluate, trend and share this

information with the Commission's Federal, State and local government partners, including, but not limited to, the Department of Homeland Security, the Federal Bureau of Investigations and local law enforcement.

The staff believes that the Commission must be kept informed with regard to malicious breaches to the barrier of a controlled access construction area. This reporting requirement allows the NRC staff to further evaluate, trend, share such information with the Commission's Federal, State, local government partners and other licensees, as appropriate, and maintain awareness of the overall effectiveness of a licensee ability to meet the performance objective under § 73.52(c).

K. Safety/Security Interface Requirements for Nuclear Power Reactors

With the implementation of an access authorization and physical security plan during construction, there is the potential to adversely impact the operation of safety and security systems that are relied upon to perform their intended functions during the physical plant construction period. The intent of the proposed change in 10 CFR 73.58 is to establish and maintain communications and preplanning of evolutions between the personnel responsible for construction activities, the personnel responsible for operational and testing activities and the personnel responsible for security activities, such that the potential impact of construction activities within the physical plant are adequately encompassed within an established review process for assessing and managing the potential for adverse effects on safety and security.

This requirement would provide specific reference to the proposed conforming change to § 73.58 for Safety and Security Interface requirements. Current § 73.58 requires in part, "b) The licensee shall assess and manage the potential for adverse effects on safety and security, including the site emergency plan, before implementing changes to plant configurations, facility conditions, or security [and] (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, system reconfiguration, access modification or restrictions, and changes to the security plan and its implementation).” For example, the interface requirements under § 73.58 would apply if the construction licensee would elect to monitor intrusion detection systems (if implemented) at the construction site under § 73.52 via the central alarm station required under § 73.55(i), “Detection and assessment systems.”

L. Documentation

The licensee shall ensure that all records required under 10 CFR 73.52(f)(2) and (3) are available for inspection, copying, retention, and removal when directed by the Commission. The licensee shall maintain all records required by Commission regulations, orders, or license conditions until the Commission terminates the license for which the records were developed, and it shall maintain superseded portions of these records for at least 3 years after the record transition to 10 CFR 73.55, unless otherwise specified by the Commission. This process must account for all information collection requirements regardless of media, including electronic recordkeeping systems.

A critical aspect of any construction site access authorization and physical protection program is a method to evaluate its effectiveness and the continued applicability of specific program elements. The evaluation process required under § 73.52(f)(6) involves a proactive approach for assessing, evaluating, and improving the construction site access authorization and physical protection program, so that this process can be used as a basis for further development and improvement of the program. Program reviews must be designed to ensure that the construction site access authorization and physical protection program maintains effectiveness and meets Commission requirements.

Findings from onsite construction site access authorization and physical protection program reviews, audits, and assessments must be tracked, trended, and promptly resolved.

IV. Section-by-Section Analysis

Section 50.34 Contents of applications; technical information.

Section 50.34(j)(1) would require construction permit applicants and holders to submit a construction security plan, implementing schedule(s), and proposed milestones for NRC review.

Section 50.34(j)(2) would describe the process for requesting an extension if the construction permit applicant or holder is unable to submit the required documentation in the specified timeframe.

Section 50.34(j)(3) would describe how the construction permit holder will meet the requirements of 10 CFR 73.52, how the construction security plan will be implemented, and how the permit holder will transition from the construction security plan to the physical security plan required under 10 CFR 73.55.

Section 50.54 Conditions of licenses.

Section 50.54(ii)(1) would require a written construction security plan to be approved by the NRC and be in effect for each construction permit holder and combined licensee during nuclear power plant construction.

Section 50.54(ii)(2) would apply to nuclear power plant combined licensees and construction permit holders subject to § 50.54(ii) and would require that licensees and permit holders retain a record of all changes to the construction security plans made without prior NRC approval for three years from the date of change. This section would also require the licensee or permit holder to submit, as specified under § 50.4 or § 52.3, a report of each change, including its evaluation, within 60 calendar days of making those changes.

Section 50.54(ii)(2) would also require nuclear power plant combined licensees and construction permit holders to maintain records of changes to the approved construction security plan which were determined to not result in a decrease in the effectiveness of the construction security plan and submit a report to the NRC within 60 days of making those changes.

Section 50.54(ii)(3) would require construction permit holders and combined licensees to implement and maintain the construction security plan after the plan has been approved by the NRC. Once approved, the construction permit holder or combined licensee must conduct an annual review of the effectiveness of the construction security plan. This review must be conducted using independent personnel not regularly associated with the management and day-to-day implementation of the construction security plan.

Section 50.54(ii)(4) would require construction permit holders and combined licensees to compile a report of the results of the annual independent evaluation of the effectiveness of the construction security plan, inform the licensee corporate management of those results, and keep the annual effectiveness evaluation in a form that is available for subsequent inspection by the NRC.

Section 50.54(ii)(5) would require construction permit holders and combined licensees to track, trend, and promptly resolve findings identified during construction site access authorization and physical security program reviews, audits, and assessments. This provision provides for the continuous incremental improvement of the construction security plan without additional regulatory burden on the licensee.

Section 50.54(ii)(6) would allow construction permit holders and combined licensees to transition from the approved construction security plan to the approved physical security plan required by §§ 73.55, 50.34(c), or 50.34(d) without prior notification to the NRC. This transition would result in an increase in effectiveness in the security of the site. This section would also require construction permit holders and combined licensees to retain the construction security plan and each change for which prior NRC approval was obtained under proposed § 50.54(ii)(1)

as a record for no less than 3 years from the date of the transition to the requirement of the physical security plan.

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

Section 52.79(a)(48) would be added to align the application requirements with the proposed § 73.52. These changes would require applicants for a Part 52 license to include the criteria under proposed § 73.52 in their final safety analysis report. The construction security plan would describe how construction permit holders and combined licensees would meet the requirements of 10 CFR 73.52, how the construction security plan would be implemented, and how the licensees would transition from the construction security plan to the physical security plan required under §§ 73.55, 50.34(c), and 50.34(d).

Section 73.1 Purpose and scope.

Section 73.1(b)(1)(i) would be amended to add the phrase, including protection during construction. This change would identify that nuclear power plant construction is within the scope of Part 73.

Section 73.52 Construction site access authorization and physical protection.

Section 73.52(a) Scope and implementation.

Section 73.52(a)(1) would require combined licensees to submit a construction security plan, implementing schedule(s), and proposed milestones for NRC review and approval. The construction security plan would describe how the combined licensee will meet the requirements of § 73.52, how the construction security plan will be implemented, and how the combined licensees will transition from the construction security plan to the physical security plan required under § 73.55. This proposed section would also describe the process for requesting an extension if the combined licensee is unable to submit the required documentation in the specified timeframe. Similar requirements for construction permit holders are specified in § 50.34(j).

This proposed paragraph would also describe the process for requesting an extension if the combined licensee is unable to submit the required documentation in the specified timeframe.

Section 73.52(a)(2) would clarify that assembly or modular fabrication facility(ies) located outside of the owner designated construction area are outside of the scope of the proposed rule. These facilities are excluded from the rule requirements because the work is performed in a controlled work environment and is subject to the same quality assurance and quality control program as remote fabrication facilities, which are also excluded. The staff believes that given the existing controls implemented at these types of facilities, combined with the proposed security checks at the construction site under this proposed rule, provides an adequate level of assurance. Therefore, additional access authorization and physical security measures on these facilities creates excessive burden for the marginal additional security provided to the nuclear power plant during construction.

Section 73.52(a)(3) would recognize that construction security activities performed in accordance with the security standards implemented under § 73.55, also meet the requirements of Section 73.52.

Section 73.52(a)(4) would delineate the performance-based requirements and provide a time frame for compliance with the requirements that follow.

Section 73.52(a)(4)(i) would require licensees to implement their site specific, written, and Commission approved, access authorization and physical security measures. The written security plan is subject to review, approval, and inspection by the Commission.

Section 73.52(a)(4)(ii) would require licensees to have written, site-specific procedures in place and available for inspection before implementing their security plan. This requirement reflects the Commission's view that licensees must focus attention on site-specific conditions in

the development and implementation of site plans, procedures, processes, and ultimately, the capability to achieve the performance objective of this proposed section.

Section 73.52(a)(4)(iii) would require licensees to have the necessary number of security personnel in place, trained, and performing the functions specified in the licensee's approved construction security plan and its implementing procedures before the licensee's plan is effective and in force.

Section 73.52(a)(4)(iv) would provide specific reference to § 73.58 for Safety and Security Interface requirements.

Paragraph 73.52(b) Construction security plan.

Paragraph 73.52(b)(1).

Section 73.52(b)(1) would reflect the Commission's view that licensees must focus attention on site-specific conditions in the development and implementation of site plans, procedures, processes, response strategies, and ultimately, the licensee's capability to achieve the performance objective of this section.

Section 73.52(b)(2) would describe the relationship between Commission regulations, the construction security plan, and implementing procedures and hold the licensee responsible for meeting Commission regulations. Section 73.52(b)(2) would ensure that licensees have procedures in place that will detect malicious acts and/or the storage of construction site restricted items through the performance of detailed searches and other methods. The NRC staff believes this requirement is needed to achieve a level of detection and access controls appropriate to the threat.

Section 73.52(b)(3) would hold licensees responsible for demonstrating the licensee's ability to implement all components of the licensee's construction security plan. This demonstration would not be limited to only the ability of security personnel to carry out their duties. This proposed requirement would clarify the Commission's view that the licensee must

also demonstrate the effectiveness of plans, procedures, and equipment to accomplish their intended function within the NRC approved construction security plan.

Paragraph 73.52(c) General performance objectives.

Section 73.52(c)(1) would establish the general performance objective of the licensee's security organization to ensure, through implementation of the site construction security plan, that malicious acts during construction cannot later reasonably result directly or indirectly in, or contribute to, radiological sabotage as defined by § 73.2.

Section 73.52(c)(2) would propose two performance objectives for the construction security plan. The written construction security plan must be designed to deter malicious acts to security- and safety-related SSCs during construction, and to detect malicious acts to security- and safety-related SSCs after the implementation of lockdown procedures.

Section 73.52(c)(3)(i) would ensure that security protective measures are implemented, as appropriate, for security- and safety-related SSCs before placement of this equipment in the controlled access construction area where they will be operated after the plant is operational. This section would ensure that necessary access authorization and physical protective measures are implemented before the installation of safety- and security-related construction/installation of SSCs (i.e. necessary for the safe shutdown of the reactor after the reactor becomes operational). A controlled access construction area is any temporarily or permanently established area containing security- or safety-related equipment or components in their final installed location that is clearly demarcated and deters unauthorized access.

Section 73.52(c)(3)(ii) would require a licensee to delineate the access authorization and physical security measures for the protection of security-or safety-related SSCs and physical security measures and access authorization measures while transitioning to the physical security program required under § 73.55. These transitional security measures must include a process

for maintaining the level of security required under § 73.52 until the implementation of the requirements under § 73.55.

Paragraph 73.52(d) Specific Security Requirements.

Section 73.52(d)(1) would require the construction permit holder or the combined licensee to develop and implement personnel access requirements before the placement of security- and safety-related SSCs in the controlled access construction area.

Section 73.52(d)(1)(i)(A) would require each construction permit holder or combined licensee to designate a reviewing official who shall certify, grant, deny, terminate, or maintain an individual's unescorted access to the controlled access construction area based on an evaluation of all relevant information required by this section. A reviewing official refers to an individual who is designated by a licensee to be responsible for reviewing and evaluating information about persons who are applying for unescorted access authorization and determining whether those individuals meet the licensee's or applicant's procedural criteria for determining trustworthiness and reliability.

Section 73.52(d)(1)(i)(B) would require the reviewing official(s) to be subject to the requirements of the construction permit holder's or combined licensee's access authorization program or comparable fitness-for-duty program because of the key role these individuals play in providing assurance that persons who are granted unescorted access to the controlled access construction area are trustworthy and reliable.

Section 73.52(d)(1)(i)(C) would require the reviewing official(s) to demonstrate their knowledge of the requirements of the construction permit holder's or combined licensee's personnel access policy to ensure that access determination have been consistent with NRC requirements and internal permit holder's or combined licensee's procedures. In addition, the reviewing official's actions affect the confidence that the public, licensee or applicant management, the Commission, and individuals who are subject to the access authorization

program, have in the integrity of the program and the accuracy and reliability of the access authorization decisions that are made under the program. Therefore, the Commission believes that reviewing officials must meet the highest standards for trustworthiness and reliability, including the requirements of an access authorization program that complies with the requirements of this section.

Section 73.52(d)(1)(i)(D) would require reviewing officials to evaluate the personnel access program data collected and make determinations to grant, deny, terminate, administratively withdraw, or permit an individual to maintain access to the controlled access construction area. Potentially disqualifying information is any derogatory information that calls into question an individual's trustworthiness and reliability. This may include, but is not limited to, derogatory information derived from reference checks, employment checks, evidence of alcohol or drug abuse or other sources of information that are reasonably determined to be reliable and accurate. Reviewing officials must evaluate derogatory information against established licensee adjudication criteria.

Section 73.52(d)(1)(ii) would delineate the access requirements established in the construction security plan. Access requirements must be implemented before the placement of security- and safety-related SSCs in the controlled access construction area. These requirements would clarify that the construction permit holder or combined licensee is responsible for meeting the Commission's regulations for implementing and maintaining an access program to provide assurance that persons who are granted access to the controlled access construction area are trustworthy and reliable.

Section 73.52(d)(1)(ii)(A) would require each construction permit holder or combined licensee to perform pre-access screening checks of personnel, and to ensure that a trustworthiness and reliability determination of these individuals is completed before granting access to areas with security- and safety-related SSCs.

Section 73.52(d)(1)(ii)(A)(1) would promote consistency within the access requirements, by requiring the use of a common access category to identify persons in the process of obtaining access to the controlled access construction area for the first time or after their last unescorted access is terminated favorably. Licensees would be required to verify that background screening elements contained in this section are completed before granting access.

Section 73.52(d)(1)(ii)(A)(1)(i) would require construction permit holders and combined licensees to verify an individual's identity before granting access to the controlled access construction area.

Section 73.52(d)(1)(ii)(A)(1)(ii) would require construction permit holders and combined licensees to implement an access authorization program during nuclear power plant construction that provides reasonable assurance that individuals are not known or suspected terrorists or associated with terrorist activities before being granted construction site access.

Section 73.52(d)(1)(ii)(A)(1)(iii) would allow construction permit holders and combined licensees to take credit for actions performed by another permit holder or licensee who has granted personnel access to their nuclear power plant site if a comparable pre-access screening or operational access authorization program was performed. The method of verifying personnel access status must be described in the construction security plan and procedures to assure communication between the nuclear power construction site and the nuclear power plant site where access is held in good standing.

Section 73.52(d)(1)(ii)(A)(1)(iv) would require construction permit holders and combined licensees to maintain a record of visitors that enter the construction site. The documentation would include, but not be limited to name, date, time, purpose of visit, employment affiliation, citizenship, and name of the individual to be visited.

Section 73.52(d)(1)(ii)(B) would require construction permit holders and combined licensees to maintain records of individuals granted access to the controlled access construction

area and to perform a demographic data check reinvestigation every 6 months for all personnel that had access to areas with security- and safety-related SSCs within the last 365 days. Demographic information on personnel must be submitted to the TSC via the NRC using established electronic means. This approach for collecting, updating, and evaluating demographic data for new nuclear power reactor construction is consistent with the approach currently implemented for operating nuclear power reactors.

Section 73.52(d)(1)(ii)(B)(2) would delineate the performance requirements for a construction worker observation policy that must be distributed to individuals before granting access to the controlled access construction area.

Section 73.52(d)(1)(ii)(B)(2)(i) would require that supervisors and management are responsible to report behavioral concerns to the reviewing official. This requirement also would require combined permit holders and combined licensees to ensure that individuals who implement the construction worker observation policy understand and comprehend the intent of the policy and the requirement to report concerns to the reviewing official. Because all individuals who are subject to the construction worker observation policy are required to conduct behavioral observation, the NRC requires all covered individuals provide written documentation acknowledging their responsibilities to implement effective observation requirements.

Section 73.52(d)(1)(ii)(B)(2)(ii) would require individuals to report any concerns arising from behavioral observation to the licensee's construction supervision and security for investigation as described in site procedures.

Section 73.52(d)(1)(ii)(C) would require construction permit holders and combined licensees to establish a construction site badge program. This program would require personnel to display badges while onsite at all times to provide the identification of personnel granted construction site access or visitor status.

Section 73.52(d)(1)(ii)(C)(1) would establish the requirement that construction permit holders, combined licensees, applicants, contractors, or vendors who are subject to this paragraph must retain the records required under this rule for the periods that are specified by the appropriate regulation or until three years after transitioning to the security requirements under § 73.55. This records retention requirement is a standard administrative provision that is used in all other parts of 10 CFR that contain substantive requirements applicable to construction permit holders, licensees, and applicants.

Section 73.52(d)(1)(ii)(C)(2) would delineate the performance objective that all visitors must be registered, a visitor badge issued, and visitor oversight provided before entry into the controlled access construction area.

Section 73.52(d)(2)(i)(A) would require periodic surveillance and observation of the construction site and construction activities.

Section 73.52(d)(2)(i)(B) would require that the construction permit holder or combined licensee develop and implement written assessment and reporting procedures to ensure that detected incidences of criminal damage, trespassing and/or willful alteration of the controlled access construction area barrier are assessed to determine impact upon construction activities. These incidences are then reported to security, management, and local law enforcement agencies, when appropriate, and implemented corrective action or compensatory measures are taken, when appropriate.

Section 73.52(d)(2)(i)(C) would require that construction permit holders and combined licensees would erect appropriately constructed barriers that facilitate effective implementation of the access control requirements. The barrier is necessary to clearly separate the controlled access construction area containing security- and safety-related SSCs from the surrounding area and to serve as a means of channeling onsite individuals through appropriate access portals to facilitate the conduct of the access control and search components of this section.

This barrier is a visual deterrent and must meet the objectives of this section. The licensee is responsible for performing a site specific, security analyses to determine the placement and design of the barrier at a given construction site.

Section 73.52(d)(2)(i)(D) would establish criteria for the construction site security organization. The composition of the construction site security organization must be based upon site-specific analysis and implemented to meet site-specific needs. This organization must be designed, staffed, trained, and equipped to implement the construction site access authorization and physical protection program in accordance with NRC requirements.

Section 73.52(d)(2)(ii) would outline the components necessary for controlled access to a nuclear power plant construction site. Construction permit holders and combined licensees must control access of personnel, vehicles, and materials through predetermined access portals. These access portals must be located outside of, or concurrent with, the barrier system of which they are a component.

Section 73.52(d)(2)(iii) would establish the measures that must be met before personnel, vehicles, and material are granted access to the controlled access construction area. The search program must cover material, equipment, and modules entering the controlled access construction area and be performed at a designated pedestrian or vehicle access portal, concurrent with or outside the construction barrier. Additionally, the licensee should, as part of a risk management program, include in search procedures the requirement for deterring the introduction of construction site restricted items.

Section 73.52(e) Transition

Section 73.52(e) would establish the criteria to transition from the construction security plan to the physical security plan required under § 73.55.

Section 73.52(e)(1) would require construction permit holders and combined licensees to meet physical security performance requirements for sweeping and securing security- and

security-related SSCs. High quality security sweeps and lockdown of completed plant areas would detect the introduction of construction site restricted items in safety and security-related SSCs and immediate areas, and transition a construction security program to an operational security program required under § 73.55. Construction permit holders and combined licensees using thorough implementation procedures would set forth training and qualification requirements for personnel assigned to conduct search and sweep activities.

Section 73.52(e)(2) would establish the performance based requirement for lockdown that must be accounted for in the construction security plan. The Commission's expectation is that once a location is locked down, that level of security achieved is maintained until the requirements under §§ 73.55(a)(4) and (e)(8) are implemented.

Paragraph § 73.52(f) Licensee notifications and documentation

Section 73.52(f)(i) would require construction permit holders and combined licensees to notify the NRC before the occurrence of identified construction security plan triggering events.

Section 73.52(f)(2) would require that the NRC and its agents be granted access to inspect, copy, or retain 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 construction permit holder, the combined licensee, or a contractor.

Section 73.52(f)(3) would require that construction permit holders and combined licensees maintain all records required to be kept by Commission regulations, orders, or license conditions, including superseded portions of these records. This would include all information collection requirements regardless of media, including electronic recordkeeping system files. Construction permit holders and combined licensees would be required to retain these records for three years after completion of the transition to the physical security plan under § 73.55 or until the Commission terminates the license for which the records were developed.

Section 73.52(f)(4) would require the construction permit holder or the combined licensee to notify the NRC of any detected malicious acts.

Section 73.52(f)(5) would require the licensee to verify that an e-mail or facsimile reporting a malicious act was properly received by the NRC. Licensees should verify reception of their e-mail or facsimile by calling the NRC Operations Center at (301) 816-5151.

Section 73.52(f)(6) would require construction permit holders and combined licensees to retain required reviews, audit reports, and information collection requirements, regardless of media, and make them available for NRC review and inspection upon request.

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

A conforming change would be made to remove the word, "operating," from § 73.58(a).
Section 73.58(c)

Section 73.58(c) would add the word, "construction," to this section. This change would identify the time of construction as an activity that requires an established reviewing process for assessing and managing the potential for adverse effects of construction activities on safety- and security-related SSCs and programs. This requirement accounts for the various conditions, events, emergencies, and activities that may exist at a construction site.

V. Guidance

In conjunction with the publication of this proposed rule, the NRC will issue proposed draft regulatory guidance in DG 5037, "Access Authorization and Physical Protection for Nuclear Power Plant Construction," on implementation of the requirements in § 73.52. This draft regulatory guide is intended to provide an acceptable method by which licensees can implement the new requirements being proposed in this rulemaking. The staff will consider any comments received on the proposed rule in its final revisions to this regulatory guide.

VI. Specific Request for Comments

In addition to the general invitation to submit comments on the proposed rule, the NRC is interested in obtaining stakeholder views on the issues associated with requiring fingerprint-based criminal record checks for individuals granted access to nuclear power plant construction sites. The rulemaking would require construction permit holders and combined licensees to ensure that individuals granted access to nuclear power plant construction sites are subject to pre-access screening checks. The screening checks support the performance of a trustworthiness and reliability determination of such individuals which must be completed before granting access to construction areas containing security- and safety-related SSCs. The rulemaking process, which includes a proposed and final rule, will provide licensees and other interested stakeholders opportunities to comment on the proposed requirements to ensure transparency in the development of requirements designed to provide adequate protection of the public health and safety and the common defense and security.

For example, imposing an FBI fingerprint-based criminal history record check for all individuals with nuclear power plant construction site access could potentially create undue administrative burdens, and be a costly, but unnecessary, requirement for licensees. It may be preferable to design the requirement in such a way that FBI fingerprint-based criminal history record checks at a nuclear power plant construction site are limited to individuals with access to the “areas of significance” within the facility. The “areas of significance” would likely encompass the nuclear reactor as well as areas containing systems and the components designed specifically for reactor safety, facility security, and the protection of the public health and safety.

Keeping these options in mind, the NRC is seeking specific comment on the following questions and issues:

1. Is fingerprinting necessary to support the performance of a trustworthiness and reliability determination of individuals granted access to construction areas containing security and safety-related structures, systems, and components (SSCs)? If not, why not? Is the proposed demographic check sufficient to deter potential terrorists?

2. Should fingerprinting be required only for construction workers accessing construction areas containing security and safety-related SSCs? Are there other preferable ways to define the population for which fingerprinting is required? If so, what are they and what are their advantages and disadvantages?

3. What would be the approximate number of personnel that must be fingerprinted for access based on construction workers accessing construction areas containing security and safety-related SSCs as described in Question 1?

4. Are there any specific categories of persons whom the NRC should consider exempting from fingerprinting?

5. What is the estimated cost or impact of providing the necessary administrative controls and training to implement fingerprint requirements for individuals permitted unescorted access to construction areas containing security and safety-related SSCs such as those described in Question 2?

6. Should persons granted access to construction areas containing security and safety-related SSCs be permitted access to the facility at times when no supervision or oversight is present (e.g., evenings or weekends)? Should the NRC require administrative controls such as maintaining records of the time and duration of persons accessing construction areas containing security and safety-related SSCs without escorts during construction?

7. An FBI criminal history record check does not provide information on individuals who are under eighteen years of age, and will obtain information only on an individual's criminal history record within the United States. Thus, for foreign nationals who have never lived in the United States, persons who are younger than 18 years old, or U.S. citizens who have lived abroad for much or all of their adult lives, the criminal history record check is unlikely to provide any useful information regarding a person's trustworthiness and reliability. Do foreign nationals and/or minors require access to construction areas containing security and safety-related SSCs? Are there alternative methods to obtain information upon which a licensee could base a trustworthiness and reliability determination for these individuals?

8. Is there any additional information regarding fingerprinting or fingerprinting requirements that the NRC should consider in preparing the proposed rule?

9. Are there other licensee programs or controls that could be relied on to provide deterrence and detection mechanisms that were not captured by the proposed regulation?

10. When is the appropriate time to require construction security measures, and to transition from the construction security plan to the physical security plan required under 10 CFR Part 73? What are the bases for these proposed transition points?

11. The NRC realized that the costs to implement the proposed access authorization and physical protection measures may be dependent upon site-specific parameters. Consequently, the NRC attempted to estimate the typical resource burden to develop, implement, and maintain the proposed construction security program. As there may be wide variance in site implementation costs, the NRC requests comments on what the expected annual costs are to implement this proposed rule. When responding to this question, please identify the major cost drivers.

VII. Availability of Documents

The NRC is making the documents identified below available to interested persons through one or more of the following methods as indicated:

Document	PDR	Web	ERR (ADAMS)
NUREG/BR-0184, "Regulatory Analysis Technical Evaluation Handbook" (January 1997)	X		ML050190193
NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Revision 4 (September 2004)	X	X	ML042820192
Environmental Assessment for Proposed Rule: Access Authorization and Physical Protection Requirements during Nuclear Power Plant Construction	X	X	ML101900455
Regulatory Analysis and Backfit Analysis for Proposed Rule: Access Authorization and Physical Protection Requirements during Nuclear Power Plant Construction	X	X	ML101900482

VIII. Plain Language

The Presidential memorandum "Plain Language in Government Writing" published June 10, 1998 (63 FR 31883) directed that the Government's documents be in clear and accessible language. The NRC requests comments on the proposed rule specifically with respect to the clarity and effectiveness of the language used. Comments should be sent to the NRC as explained in the ADDRESSES caption of this notice.

IX. Agreement State Compatibility

Under the "Policy Statement on Adequacy and Compatibility of Agreement States Programs," approved by the Commission on June 20, 1997, and published in the *Federal Register* (62 FR 46517; September 3, 1997), this rule is classified as compatibility "NRC." Compatibility is not required for Category "NRC" regulations. The NRC program elements in this category are those that relate directly to areas of regulation reserved to the NRC by the Atomic Energy Act or the provisions of 10 CFR. Although an Agreement State may not adopt program

elements reserved to the NRC, it may wish to inform its licensees of certain requirements via a mechanism that is consistent with the particular State's administrative procedure laws. Category "NRC" regulations do not confer regulatory authority on the State.

X. Voluntary Consensus Standards

The National Technology Transfer and Advancement Act of 1995, Pub. L. 104-113, requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless using such a standard is inconsistent with applicable law or is otherwise impractical. The requirements in this rulemaking address procedural and information collection and reporting requirements necessary to support the NRC's regulatory activities on construction permits under 10 CFR Part 50 and combined licenses under 10 CFR Part 52, and to facilitate the NRC's conduct of hearings on construction security which may be held in accordance with Section 189 of the Atomic Energy Act of 1954, as amended. These requirements do not establish standards or substantive requirements with which construction permit or combined license holders must comply. Thus, this rulemaking does not constitute establishment of a standard containing generally applicable requirements falling within the purview of the National Technology Transfer and Advancement Act and the implementing guidance issued by the Office of Management and Budget.

XI. Finding of No Significant Environmental Impact: Environmental Assessment

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required.

The determination of this environmental assessment is that there will be no significant offsite impact to the public from this action. However, the general public should note that the NRC is seeking public participation and the environmental assessment is available as indicated

in Section VI of this document. Comments on any aspect of the environmental assessment may be submitted to the NRC as indicated under Section I, "Submitting comments and Accessing information" in the SUPPLEMENTARY INFORMATION section of this document.

The NRC has sent a copy of this proposed rule to every State Liaison Officer and requested their comments on the environmental assessment.

XII. Paperwork Reduction Act Statement

This proposed rule contains new or amended information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq). This rule (or policy statement) has been submitted to the Office of Management and Budget for review and approval of the information collection requirements.

1. *Type of submission, new or revision:* Revision
2. *The title of the information collection:* 10 CFR Parts 50, 52, and 73; Requirements for Access Authorization and Physical Protection during Nuclear Power Plant Construction
3. *The form number if applicable:* N/A
4. *How often the collection is required:* One-time, on occasion, and annually during the period of nuclear power plant construction.
5. *Who will be required or asked to report:* Construction permit holders and combined license holders, during the period of nuclear power plant construction.
6. *An estimate of the number of annual responses:* 50 (40 annual responses plus 1.67 annualized one-time responses plus 8 recordkeepers.
7. *The estimated number of annual respondents:* 8
8. *An estimate of the total number of hours needed annually to complete the requirement or request:* 44,789 hours (10 CFR Part 50 – 2,328 hours; 10 CFR Part 52 – 1,956 hours; and 10 CFR Part 73 – 40,505 hours)

Abstract: The U. S. Nuclear Regulatory Commission (NRC) is proposing to amend its

regulations in §§50.34, 50.54, 52.79, 73.1, 73.52, and 73.58 to prescribe requirements for access authorization and physical protection in protecting nuclear power plants against consequences resulting from malicious acts that occur during plant construction. Specifically, the NRC is proposing new provisions that apply during nuclear power plant construction. The new provisions would require physical protection measures; access authorization controls; physical inspections; performance of high-quality security sweeps, and lockdown measures and procedures for securing the security-and-safety-related structures, systems, and components (SSCs) before entering the operational phase of the facility.

The NRC is seeking public comment on the potential impact of the information collections contained in this proposed rule (or proposed policy statement) and on the following issues:

1. Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?
2. Is the estimate of burden accurate?
3. Is there a way to enhance the quality, utility, and clarity of the information to be collected?
4. How can the burden of the information collection be minimized, including the use of automated collection techniques?

A copy of the OMB clearance package may be viewed free of charge at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Room O-1 F21, Rockville, MD 20852. The OMB clearance package and rule are available at the NRC worldwide Web site: <http://www.nrc.gov/public-involve/doc-comment/omb/index.html> for 60 days after the signature date of this notice.

Send comments on any aspect of these proposed information collections, including suggestions for reducing the burden and on the above issues, by **(INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER)** to the Information Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to INFOCOLLECTS.Resource@NRC.GOV and to the Desk Officer, Christine Kymn, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0011; 3150-0151; and 3150-0002), Office of Management and Budget, Washington, DC 20503. Comments on the proposed information collection may also be submitted via the Federal eRulemaking Portal <http://www.regulations.gov>, Docket ID **NRC-2009-0195**. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date. You may also e-mail comments to [Christine J. Kymn@omb.eop.gov](mailto:Christine.J.Kymn@omb.eop.gov) or comment by telephone at (202) 395-4638.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

XIII. Regulatory Analysis

The NRC has prepared a regulatory analysis on this proposed rule and has included it in this Federal Register document. The analysis examines the costs and benefits of the alternatives considered by the NRC. The Commission requests public comments on the draft regulatory analysis. Availability of the regulatory analysis is indicated in Section VI of this document. Interested persons may submit comments on the draft analysis to the NRC as indicated under Section I, "Submitting comments and Accessing information" in the SUPPLEMENTARY INFORMATION section of this document.

XIV. Regulatory Flexibility Act Certification

In accordance with the Regulatory Flexibility Act (5 U.S.C. 605(b)), the Commission certifies that this rule will not, if promulgated, have a significant economic impact on a substantial number of small entities. This proposed rule affects only the licensing and operation of nuclear power plants. The companies that own these plants do not fall within the scope of the definition of "small entities" presented in the Regulatory Flexibility Act or the size standards established by the NRC (§ 2.810).

XV. Backfit Analysis

As required by § 50.109, the Commission has completed a backfit analysis for the proposed rule. The Commission finds that the backfits contained in the proposed rule, when considered in the aggregate, would constitute a substantial increase in access authorization and physical protection, and would be justified in view of this increased protection of the public health and safety or the common defense and security. Availability of the backfit analysis is indicated in Section VII of this document.

List of Subjects

10 CFR Part 50

Antitrust, Classified information, Criminal penalties, Fire protection, Intergovernmental relations, Nuclear power plants and reactors, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements

10 CFR Part 52

Administrative practice and procedure, Antitrust, Backfitting, Combined license, Early site permit, Emergency planning, Fees, Inspection, Limited work authorization, Nuclear power plants and reactors, Probabilistic risk assessment, Prototype, Reactor siting criteria, Redress of site, Reporting and recordkeeping requirements, Standard design, Standard design certification

10 CFR Part 73

Criminal penalties, Export, Hazardous materials transportation, Import, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements, Security measures

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 553, the NRC is proposing to adopt the following amendments to 10 CFR Parts 50, 52, and 73.

Part 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

1. The authority citation for part 50 continues to read as follows:

AUTHORITY: Secs. 102, 103, 104, 105, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 938, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2132, 2133, 2134, 2135, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 194 (2005). Section 50.7 also issued under Pub. L. 95–601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102–486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5841). Section 50.10 also issued under secs. 101, 185, 68 Stat. 955, as amended (42 U.S.C. 2131, 2235); sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.13, 50.54(dd), and 50.103 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

Sections 50.23, 50.35, 50.55, and 50.56 also issued under sec. 185, 68 Stat. 955 (42 U.S.C. 2235). Sections 50.33a, 50.55a and Appendix Q also issued under sec. 102, Pub. L. 91–190, 83 Stat. 853 (42 U.S.C. 4332). Sections 50.34 and 50.54 also issued under sec. 204, 88 Stat. 1245 (42 U.S.C. 5844). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97–415, 96 Stat. 2073 (42 U.S.C. 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80–50.81 also issued under sec. 184, 68 Stat. 954, as amended (42

U.S.C. 2234). Appendix F also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

2. In §50.34 paragraph (j) is added to read as follows:

§ 50.34 Contents of applications; technical information.

* * * * *

(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 for nuclear power plants and the requirements of paragraph (j)(1)(iv) of this section apply to applicants who request the reinstatement of a construction permit for nuclear power plants in a deferred or terminated plant status as follows:

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

(iii) Holders of a construction permit for a nuclear power plant under this part that have not received an operating license under this part before [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 [EFFECTIVE DATE OF THE FINAL RULE].

(iv) Holders of a construction permit for a nuclear power plant which is in deferred or terminated plant status before [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.

3. In § 50.54 paragraph (ii) is added to read as follows:

§ 50.54 Conditions of licenses.

* * * * *

(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 Commission. A licensee desiring to make a change that would decrease the effectiveness of the plan shall submit an application for amendment to the license under § 50.90 of this part.

(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 of this part 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 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 transition from the construction security plan required by §73.52 of this chapter, to the physical security plan required by §73.55 of this chapter without prior NRC approval. The licensee must maintain a copy of the written construction security plan enforced when the construction security plan is terminated for no less than 3 years from the date of termination.

PART 52 - LICENSES, CERTIFICATIONS, AND APPROVALS FOR NUCLEAR POWER PLANTS

4. The authority citation for part 52 continues to read as follows:

AUTHORITY: Secs. 103, 104, 161, 182, 183, 186, 189, 68 Stat. 936, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2133, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, 202, 206, 88 Stat. 1242, 1244, 1246, as amended (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109–58, 119 Stat. 594 (2005), secs. 147 and 149 of the Atomic Energy Act.

5. In § 52.79, paragraph (a)(48) is added to read as follows:

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

(a) * * *

(48)(i) A construction security plan describing how the applicant for a nuclear power plant 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.

* * * * *

Part 73—PHYSICAL PROTECTION OF PLANTS AND MATERIALS

6. The authority citation for part 73 continues to read as follows:

AUTHORITY: Secs. 53, 161, 149, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2169, 2201); sec. 201, as amended, 204, 88 Stat. 1242, as amended, 1245, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 5841, 5844, 2297f); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. 109–58, 119 Stat. 594 (2005).

Section 73.1 also issued under secs. 135, 141, Pub. L. 97–425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 73.37(f) also issued under sec. 301, Pub. L. 96–295, 94 Stat. 789 (42 U.S.C. 5841 note). Section 73.57 is issued under sec. 606, Pub. L. 99–399, 100 Stat. 876 (42 U.S.C. 2169).

7. In § 73.1, paragraph (b)(1)(i) is revised to read as follows:

§ 73.1 Purpose and Scope.

* * * * *

(b) * * *

(1) * * *

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

* * * * *

8. Section 73.52 is added to read as follows:

§ 73.52 Construction site access authorization and physical protection.

(a) *Scope and implementation.* (1) Applicants for an operating license for a nuclear power plant 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 before [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 [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 [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 [EFFECTIVE DATE OF THE FINAL RULE].

(iii) Holders of a combined license issued before [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 § 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 [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, modular fabrication, or other manufacturing 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) Implemented the access authorization and physical security measures specified in the site specific procedures;

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

(iii) All appropriate security and badged personnel in place, trained, 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.

(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 objective of this section is to provide reasonable assurance that malicious acts during nuclear power plant construction cannot 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) Deter malicious acts to security- and safety-related SSCs during construction; and
- (ii) Detect malicious acts to security- and safety-related SSCs after the implementation of lockdown procedures required under paragraph (e)(2) of this section.

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

(i) Implementation of physical security and access authorization measures before the placement of security- and safety-related SSCs in their final installed location within the controlled access construction area; and

(ii) Implementation of physical security measures and access authorization measures for transitioning to the security requirements under § 73.55 of this part,

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

(1) Personnel Access: The licensee shall implement the following access security requirements consistent with paragraph (c)(3)(i) of this section:

(i) Reviewing Official(s). (A) The licensee shall designate a reviewing official who shall certify, grant, deny, unfavorably terminate, or maintain an individual's unescorted access based on an evaluation of all relevant information required by this section.

(B) The licensee shall determine that the reviewing official is trustworthy and reliable as defined in § 26.5 of this chapter to perform duties related to granting unescorted access.

(C) The reviewing official shall demonstrate knowledge of all aspects of the Personnel Access Policy and applicable fitness-for-duty program requirements impacting an individual's access authorization.

(D) The reviewing official shall review and evaluate all relevant information collected about an individual to determine whether the individual is trustworthy and reliable.

(ii) Access Requirements

(A) Pre-Access Screening Checks. The licensee shall perform pre-access screening checks of personnel and shall ensure that a trustworthiness and reliability determination of such individuals have been completed before granting access to areas with security and safety-related SSCs.

(1) Initial access. Before granting access to the areas with security and safety-related SSCs, the Reviewing Official shall ensure that the following measures are completed for each individual:

(i) Verify the identity of an individual to ensure that the applicant is the person that he or she has claimed to be through the compilation of information presented by the individual and other developed data. At a minimum, 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; or a comparable foreign government identification card) with the physical characteristics of the individual.

(ii) Complete the required demographic data check. Demographic data shall be electronically submitted to the NRC for review.

(iii) Personnel verified to have unescorted access for an operating plant may be granted access without completing the items listed in paragraphs (i) and (ii) of this section.

(iv) A visitor register shall be maintained. Visitors shall register their name, date, time, purpose of visit, employment affiliation, citizenship, and name of the individual to be visited. Visitors shall be escorted into all areas with security and safety-related SSCs.

(B) Maintaining construction site access.

(1) The licensee shall conduct a semiannual NRC demographic data check for all personnel that had access to areas with security and safety-related SSCs within the last 365 days. Demographic data shall be compiled by January 15 and July 15 of each calendar year and electronically submitted to the NRC within 10 calendar days of these dates.

(2) Construction Worker Observation Policy. The licensee shall establish, implement, and provide all construction personnel a copy of the construction worker observation policy.

(i) Management and oversight personnel that are responsible for observing individuals who are subject to the policy shall report any concerns or violations to the reviewing official.

(ii) Observed aberrant behavior and events shall be reported to construction supervision and security for investigation. Reports and investigations shall be maintained for three years after transitioning to the security requirements under § 73.55 of this part.

(C) Site Badge Program. The licensee shall establish, implement, and provide a badge program. Identification badges with photographs shall be required to gain access to the areas with security- and safety-related SSCs. Badges must be visibly displayed at all times.

(1) Records shall be maintained for three years after transitioning to the security requirements under § 73.55 of this part. Records shall include at a minimum the name, date, and areas allowed access and which contained security- and safety-related SSCs.

(2) Badges shall be issued to visitors who are allowed access to areas with security and safety related SSCs. Visitor badges must clearly identify that the person is a visitor. The licensee shall use only authorized personnel to escort visitors within the controlled access construction area to provide visitor oversight.

(2) Physical security.

(i) Consistent with the requirements presented under paragraph (c)(3)(i) of this section, the licensee shall implement the following physical security requirements for the deterrence of the malicious acts stipulated in the general performance objectives under paragraph (c) of this section:

(A) Onsite surveillance at the nuclear reactor construction site;

(B) Assessment and reporting procedures for incidences of malicious acts during construction;

(C) A barrier to implement the access control requirements in paragraph (d)(2)(ii) of this section; and

(D) A construction site security force composed of personnel to implement measures in accordance with the construction security plan.

(ii) Access control requirements. The licensee shall have physical security measures in place to control access and channel personnel, vehicles, and materials to planned access portals into the controlled access construction area.

(iii) Search program requirements. The licensee shall establish a personnel, vehicle, and material search and inspection process to deter the introduction of unauthorized firearms, explosives, and incendiary devices and will meet the general performance objectives of paragraph (c) of this section.

(e) Transition. Consistent with the requirements presented under paragraph (c)(3)(ii) of this section, Licensees shall discontinue implementation of the requirements under 10 CFR 73.52 after implementation of the security requirements under § 73.55(a)(4) of this part. Before transitioning to the requirements under 10 CFR 73.55, the licensee shall perform the following actions:

(1) Security sweeps of controlled access construction area. The licensee shall, before implementing the requirements under § 73.55 of this part and before lockdown in accordance with paragraph (2) of this section, conduct security sweeps of safety and security-related SSCs to detect, at a minimum, unauthorized firearms, explosives, and incendiary devices and will meet the general performance objectives of paragraph (c) of this section.

(2) Lockdown of the controlled access construction area. The licensee shall ensure that controlled access construction areas are locked down after completion of security sweeps required by paragraph (1) of this section and before the implementation of the requirements under § 73.55 of this part. The lockdown shall assure the level of security achieved after completion of the security sweeps is maintained until the implementation of security requirements under § 73.55 of this part.

(f) Licensee notifications and documentation.

(1) The licensee shall notify the NRC by letter at least 60 days before:

(i) The scheduled onsite in-place setting, installing, or erecting of security- and safety-related systems or components where they will be operated and

(ii) The scheduled implementation of lockdown procedures including the commencement of security sweeps.

(2) 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.

(3) 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 years after the transition to § 73.55 of this section, unless otherwise specified by the Commission.

(4) The licensee shall notify NRC of any detected malicious acts. The notification shall be by e-mail to hoo.hoc@nrc.gov, which is the preferred method of notification, by facsimile to the NRC Operations Center at 301-816-5151, or by telephone at 301-816-5100 within 24 hours following the licensee assessment and determination that any person knowingly or willingly:

(i) Destroys, tampers with, or causes physical damage to nuclear plant structures, systems, or components during construction;

(ii) Attempts or succeeds in bringing unauthorized firearms, explosives, incendiary devices or construction site restricted items onto the construction site, or

(iii) Trespasses; alters or criminally damages barriers required under §73.52(d)(2).

(5) Verification that the e-mail or facsimile was received should be made by calling the NRC Operations Center.

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

9. In § 73.58, paragraphs (a) and (c) are revised to read as follows:

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

* * * * *

(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).

* * * * *

Dated at Rockville, Maryland, this day of 2010.

For the Nuclear Regulatory Commission.

Annette L. Vietti-Cook,
Secretary of the Commission.

**Draft Regulatory Analysis for Proposed Rule:
Access Authorization and Physical Protection during
Nuclear Power Plant Construction
(10 CFR Part 73)**

U.S. Nuclear Regulatory Commission

August 2010



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Executive Summary

The U.S. Nuclear Regulatory Commission (NRC) is proposing to add access authorization and physical protection requirements during new nuclear power plant construction to the existing requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73, “Physical Protection of Plants and Materials.” The proposed rulemaking codifies access authorization controls; physical inspections; lockdown measures and procedures for securing the security- and safety-related structures, systems, and components; and the performance of high-quality security sweeps before the nuclear power plant transitions to its operational phase.

The regulatory analysis examines the benefits and costs of the proposed access authorization and physical protection requirements during nuclear power plant construction relative to the baseline of current regulations and voluntary actions on the part of industry. The analysis makes the following key findings:

- **Total Cost to Industry, Including Backfits.** The proposed rule would result in a total one-time cost to all nuclear power plant construction sites of approximately \$7.1 million followed by total annual costs of approximately \$29 million during the construction period. The analysis estimates the total present value of these costs at \$109.2 million (using a 7-percent discount rate) and at \$118.88 million (using a 3-percent discount rate) over the 4-year construction period. Of the estimated costs to industry, fourteen percent qualify as backfits (see Section 4.2).
- **Average Cost per Construction Site for Power Reactors.** The average nuclear power plant construction site, which may include multiple units, would incur a one-time cost of approximately \$504,000 followed by annual costs during construction of approximately \$2.1 million.
- **Value of Benefits Not Reflected Quantitatively.** With the exception of some direct monetary savings to industry, the cost figures shown above do not reflect the value of the benefits of the proposed rule. Section 4.1 qualitatively evaluates these benefits.
- **Costs to the NRC.** The rule would result in a one-time cost to the NRC of approximately \$2.6 million, followed by annual costs of approximately \$400,000. The analysis estimates the total present value of these NRC costs at \$4 million (using a 7-percent discount rate) and at \$4.1 million (using a 3-percent discount rate).
- **Decision Rationale.** The NRC believes that the rule is cost-justified because the proposed regulatory initiatives for increased and consistent access authorization and physical protection measures during nuclear power plant construction would deter and detect malicious acts that could compromise the safe construction and subsequent operation of new nuclear power plants. This deterrence and detection of malicious activities will increase public health and safety, promote the common defense and security, and protect the environment.

The proposed rule would apply to any new nuclear power reactor construction after the effective date of the final rule, including those referenced in both construction permit and combined license applications that the NRC has received to date. Because access authorization and

physical protection costs are primarily a function of the site rather than the reactor design, the regulatory and backfit analyses reflect costs associated with construction permits in deferred status, and those units covered by new combined license applications. This analysis estimates that one-time and annual costs to implement the proposed access authorization and physical protection measures will be approximately equal for new power reactors constructed at Greenfield sites with those co-located with currently operating nuclear power plants (i.e., because the development of construction security plans for the new sites will require similar development and implementation efforts). In addition, the quantitative results do not reflect any incremental cost difference between the construction permit and combined license plants because of the uncertainty associated with the duration of the construction period and with when these facilities will be licensed and operated.

Acronyms

ADAMS	Agencywide Documents Access and Management System
CFR	<i>Code of Federal Regulations</i>
COL	combined license
CP	construction permit
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
SSC	structure, system, and component

1. Introduction

The U.S. Nuclear Regulatory Commission (Commission or NRC) is proposing to add requirements for access authorization and physical protection during new nuclear power plant construction to the existing requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73, "Physical Protection of Plants and Materials." Specifically, the proposed rule would require licensees to implement physical protection measures during the reactor construction phase. These would include access authorization controls; physical inspections; lockdown measures and procedures for securing the security- and safety-related structures, systems, and components (SSCs); and the performance of high-quality security sweeps before the nuclear power plant transitions to its operational phase.

This analysis presents background material, rulemaking objectives, alternatives, and input assumptions, and it describes the consequences of the rule language and alternative approaches necessary to accomplish the regulatory objectives.

The remainder of this introduction is divided into two sections. Section 1.1 states the problem and the objective of the rulemaking. Section 1.2 provides background information.

1.1 Statement of the Problem and Objective of the Rulemaking

Current NRC regulations do not include requirements for access authorization or physical protection at nuclear power plant construction sites before the receipt of nuclear fuel. Although licensees may provide industrial or commercial security during construction to reduce commercial risk, the lack of required security measures before receipt of fuel is inconsistent with the potential security risk stemming from malicious activities that could occur during the construction of new nuclear power plants. This omission could result in an inadequate level of assurance of a licensee's ability during construction to deter or detect malicious activities that could adversely affect the safe construction and subsequent operation of security- and safety-related systems and components at NRC-regulated commercial nuclear power plants.

The objective for this rulemaking is to substantially enhance security at nuclear power plant construction sites by providing mechanisms to deter and detect malicious acts during construction that could later be used to cause or facilitate a radiological sabotage event during plant operation.

1.2 Background

The requirements for the physical protection measures and the access authorization program for granting individuals unescorted access to protected areas of operating nuclear power plants appear in 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors against Radiological Sabotage." These regulations apply upon the receipt of nuclear fuel onsite within the protected area.

Discussions with terrorist experts confirmed that both domestic and international terrorist groups have targeted, or have expressed the intent to target, nuclear facilities in the United States. These terrorist groups have demonstrated the capacity to perform acts of sabotage and

violence capable of destroying property. Some groups are on record as strongly opposing the expansion of the nuclear power industry in the United States.

The primary concern relative to terrorist-related activities during the new reactor construction period is the ability of potential adversaries to introduce undetected defects into security- or safety-related SSCs or to pre-position construction site restricted items (e.g., unauthorized firearms, explosives, or incendiary devices) that could be used for malicious purposes after the plant is operational.

On September 7, 2006, the NRC staff provided the Commission with an information paper that describes the agency's plans to work with the nuclear power reactor industry to develop appropriate access authorization and physical protection measures for nuclear power plants under construction. These plans included the development of measures designed to deter or prevent potential adversaries from gaining site-specific information and to deter malevolent acts of terrorism or other activities that could compromise the safe construction or subsequent operation of security- or safety-related SSCs.

As a result of the September 7, 2006, memorandum, the NRC staff held working-level meetings with the industry's New Plants Security Task Force and discussed numerous issues associated with security at new reactor construction sites. These meetings culminated in the development of Revision 2 to Appendix F, "Security Measures during New Reactor Construction," to Nuclear Energy Institute (NEI) 03-12, "Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan" (NEI's template for a generic power reactor security plan), issued September 2007. Appendix F outlines security measures for the construction phase of a new nuclear power plant, independent of whether the plant is to be constructed within an existing owner-controlled area or on an undeveloped or greenfield site. Applicants may voluntarily choose to incorporate the security measures that appear in Appendix F into their security plans.

On November 30, 2007, the NRC staff requested in an information paper that the Commission approve the establishment of construction site personnel access authorization and physical protection requirements for holders of combined licenses (COLs), construction permits (CPs), or limited work authorizations.

On January 23, 2008, the Commission issued a staff requirements memorandum in response to SECY-07-0211, approving the NRC staff proposal to establish access authorization and physical protection requirements for new nuclear power reactor sites under construction, consistent with Appendix F to NEI 03-12. In addition, the Commission authorized the NRC staff to continue to work with industry to develop alternative measures in lieu of fingerprint submission and to resolve open items related to physical protection. The Commission also stated that the NRC staff should leave the option of fingerprinting open as a last resort if alternative measures could not be developed and should request public comment on this issue. The Commission also authorized the NRC staff to pursue access authorization and physical protection rulemaking that would apply to nuclear power plant construction sites.

On March 16, 2010, the staff released "Draft Rule Language—Access Authorization and Physical Security for Nuclear Power Plant Construction" (ADAMS Accession No. ML100750461). After its release, the staff held a public meeting with stakeholders on March 31, 2010, to exchange views and information on the goals and objectives contained in

the proposed rule text. Feedback received during the March 31, 2010, public meeting included the need to focus the proposed rule on performance-based versus specific requirements and to simplify the rule text with clear objectives and framework. A summary of the public meeting is available in ADAMS under Accession No. ML101090147. On August 27, 2010, the staff held a second public workshop to discuss the status and schedule of the proposed rulemaking. The workshop objective was to facilitate improved stakeholder understanding of the proposed rule so that stakeholders could provide informed comments on the proposed rule during the public comment period. A summary of the public meeting is available in ADAMS under Accession No. ML102440075.

The NRC believes that this proposed rulemaking would substantially enhance security at nuclear power plant construction sites by providing mechanisms to deter and detect malicious acts during construction that could have a latent or delayed effect and could later be used to cause or facilitate a radiological sabotage event during plant operation.

2. Identification and Preliminary Analysis of Alternative Approaches

The following sections describe the two regulatory options that the NRC is considering in order to meet the rulemaking objective identified in the previous section. Section 3 presents a detailed analysis.

2.1 Option 1: No Action

Under Option 1, the no-action alternative, the NRC would not amend the current regulations at 10 CFR Part 73 on access authorization and physical protection for nuclear power plant construction. Current NRC regulations do not include requirements for access authorization or physical protection at nuclear power plant construction sites before the receipt of nuclear fuel. Holders of CPs and COLs would continue to comply with existing regulations. They may also choose to voluntarily implement a construction-related, industrial security program predicated on such drivers as insurance, banking, safety, and common risk, asset protection and loss prevention policies common in the course of conducting business. Option 1 would avoid costs that the proposed rule would impose; however, it would leave the existing security issues during nuclear power plant construction unresolved and would not reflect the requirements that the NRC considers necessary to assure the adequate protection of public health and safety and the common defense and security. Option 1, which is the no-action alternative, is the baseline for this regulatory analysis.

2.2 Option 2: Amend Regulations To Provide for Access Authorization and Physical Protection Requirements during Nuclear Power Plant Construction

Under this option, the NRC would require licensees to implement physical protection measures, access authorization controls, physical inspections, the performance of high-quality security sweeps, and lockdown measures and procedures for securing the security- and safety-related SSCs before the nuclear power plant transitions to its operational phase. The rule would require licensees to implement access authorization and physical security measures before the scheduled onsite in-place setting, installation, or erection of security- or safety-related SSCs in the areas in which they will be permanently operated.

The rule would also require licensees to perform the following security inspection activities before implementing the required lockdown procedures:

- Conduct lockdown measures and procedures for securing the security- and safety-related SSCs before the plant enters its operational phase.
- Perform high-quality security sweeps before the licensed material arrives and the nuclear power plant transitions to its operational phase.

Once this rule becomes effective, each CP holder or each combined licensee that has not received a 10 CFR 52.103(g) finding that the acceptance criteria in the combined license are met would be required to submit a construction security plan and the proposed schedule for implementing the construction security program for NRC review and approval. To allow for the planning of NRC inspections, licensees would need to notify the agency by letter at least 60 days before implementing the physical protection measures identified in 10 CFR 73.52(f).

The NRC has estimated the benefits and costs of this option, as described in Sections 3 and 4 of this regulatory analysis, and has pursued Option 2 for the reasons discussed in Section 5.

3. Estimation and Evaluation of Values and Impacts

This section describes the analysis that the NRC conducted to identify and evaluate the benefits (values) and costs (impacts) of the two regulatory options. Section 3.1 identifies the attributes that the staff expects the proposed rulemaking to affect. Section 3.2 describes how the values and impacts have been analyzed. Finally, Section 3.3 presents the detailed results of the projected values and impacts.

3.1 Identification of Affected Attributes

This section identifies the factors within the public and private sectors that the final rule is expected to affect, using the list of potential attributes in Chapter 5 of NUREG/BR-0184, "Regulatory Analysis Technical Evaluation Handbook," issued January 1997 (Ref. 1), and in Chapter 4 of NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Revision 4, issued September 2004 (Ref. 3). The evaluation considered each attribute listed in Chapter 5 of NUREG/BR-0184. The basis for selecting those attributes is presented below.

Affected attributes include the following:

- Occupational Health (Accidents). The action would reduce the risk that occupational health could be affected by radiological releases resulting from radiological sabotage.
- Industry Implementation. The action would require licensees to implement physical protection measures during new nuclear power plant construction and to prepare and implement a construction security plan.
- Industry Operation. The proposed action would require licensees to conduct additional security activities beyond those currently being conducted voluntarily. Specifically, the

rule would require access authorization controls, physical inspections, lockdown measures and procedures for securing the SSCs, and the performance of high-quality security sweeps before the plant transitions to its operational phase. The regulatory action would also require licensees to retain records.

- **NRC Implementation.** Under the proposed action, the NRC would develop or revise guidance and inspection procedures and review and approve licensee construction security plans as a result of the new requirements.
- **Public Health (Accidents).** The proposed action would reduce the risk that public health could be affected by radiological releases resulting from radiological sabotage.
- **Offsite Property.** The proposed action would reduce the risk that offsite property could be affected by radiological releases resulting from radiological sabotage.
- **Onsite Property.** The proposed action would reduce the risk that onsite property could be affected by radiological releases resulting from radiological sabotage.
- **NRC Operations.** The proposed action would require the NRC to conduct periodic inspections during nuclear power plant construction related to the new requirements. In addition, the proposed action would require licensees to submit reports to the NRC for review.

Attributes that the rulemaking options should *not* affect include the following: (1) occupational health (routine), (2) public health (routine), (3) regulatory efficiency, (4) environmental considerations, (5) general public, (6) safeguards and security considerations, (7) improvements in knowledge, and (8) antitrust considerations and other Government regulations.

3.2 Analytical Methodology

This section describes the methodology used to analyze the consequences associated with the proposed rule. The values (benefits) include any desirable changes in the affected attributes. The impacts (costs) include any undesirable changes in the affected attributes.

The NRC collected input assumptions using data and information from NRC workgroups and staff experience and NRC databases.

As described in Section 3.1, the attributes expected to be affected include the following:

- industry implementation
- industry operation
- public health (accidents)
- occupational health (accidents)
- NRC implementation
- offsite property
- onsite property
- NRC operations

In accordance with guidance from the Office of Management and Budget and NUREG/BR-0058, Revision 4, this regulatory analysis presents the results of the analysis using both 3-percent and 7-percent real discount rates. The NRC seeks public comments on the accuracy of these regulatory analysis assumptions and on the validity of the proposed rule's value and impact estimation methods.

3.2.1 Model Design

This section describes the cost model and the data sources used to calculate the values and impacts for the attributes affected by the proposed rule.

3.2.2 Data and Assumptions

The main analysis assumes that one-time implementation costs will be incurred in calendar year 2011. The analysis assumes that ongoing costs of implementing access authorization and physical security measures during plant construction related to the rule will begin in 2011 and will be modeled on an annual cost basis. The analysis calculated cost and savings over a 20-year time horizon with each year's costs or savings discounted back at a 7-percent and 3-percent discount rate in accordance with NUREG/BR-0058, Revision 4. Costs and savings are expressed in 2010 dollars.

3.2.2.1 Data/Affected Entities

The analysis makes the following assumptions regarding the entities affected (licensees):

- The NRC is estimating 14 total reactor construction sites for this review, including the 13 COL applications currently under review by the NRC and 1 construction permit in deferred status. The NRC does not expect to receive any additional COL applications until fiscal year 2012. However, the licensing and construction of these new nuclear power plants may become the impetus for new COL applications.
- The analysis assumes that each construction site will employ approximately 4,000 workers.

3.2.2.2 Other Data and Assumptions

The analysis makes the following other assumptions:

- The analysis assumes that the labor rate for the NRC staff is \$119 per hour.
- The analysis assumes a \$100 per hour labor rate for licensee nonsecurity-related personnel.
- The analysis assumes a \$30 per hour labor rate for licensee security personnel and a \$35 per hour labor rate for licensee reviewing officials.

- The analysis assumes that the final rule will become effective in December 2011.
- The analysis assumes that the ongoing costs of construction security related to the rule begin in 2011 and are modeled on an annual cost basis. Ongoing costs related to the no-action alternative are zero because current NRC regulations do not include requirements for access authorization or physical protection at nuclear power plant construction sites before the receipt of nuclear fuel.
- For the analysis, the NRC assumed that all COL applications currently under active review would be approved and issued on their current published schedules. The NRC assumed that two CP holders would request the reinstatement of their CP for facilities in either a deferred or terminated plant status. In addition, the NRC assumed that each COL applicant who receives their combined license would begin construction upon issuance of the COL and that construction would span a period of 4 years.
- The NRC assumed that any one-time implementation costs would be incurred during the first year following the reactivation of their CP or the scheduled receipt of their COL. One-time costs for the second unit of a two-unit construction site would be incurred 4 years after receipt of the COL for that site.
 - The analysis calculated cost and savings over a 4-year construction timeframe and a 3-year postconstruction recordkeeping period, with each year's costs or savings discounted back at a 7-percent and 3-percent discount rate, in accordance with NUREG/BR-0058, Revision 4.
- To the extent practical, quantitative information (e.g., costs and savings) and qualitative information (e.g., the nature and magnitude of impacts) on attributes affected by the rule were obtained from, or developed in consultation with, the NRC staff.

3.3 Detailed Results

This section presents a detailed estimate of the values and impacts for the proposed rulemaking (Option 2). Some values and impacts are addressed qualitatively for reasons discussed in Section 3.2. Exhibits 3-1 and 3-2 summarize these results.

Option 1: No Action

By definition, this option does not result in any values or impacts.

Option 2: Amend Regulations To Provide for Access Authorization and Physical Protection Requirements during Nuclear Power Plant Construction

Industry Implementation

Impact: Written Construction Security Plan

- The regulation at 10 CFR 52.79, “Contents of Applications; Technical Information in Final Safety Analysis Report,” requires CP applicants, COL applicants, and applicants that request the reinstatement of a CP for facilities in either a deferred or terminated plant status to submit the written construction security plan with the proposed implementation schedule and proposed milestones for NRC review. The NRC estimates that each construction site will require 800 hours to prepare and approve a construction security plan with an implementing schedule for submittal to the NRC. This is an \$80,000 one-time cost to each licensee.

Impact: Detailed Site-Specific Security Procedures

- The regulation at 10 CFR 50.54(ii)(3) requires CP holders and combined licensees to maintain the construction security plan and to annually review all plan elements. The NRC estimates that each construction site will require 320 hours to prepare and approve procedures for developing and maintaining its construction security plan and its detailed construction security procedures. This is a \$32,000 one-time cost to each licensee.

Impact: Badge Program – The Initial Setup Cost for the Badge Machine and the Initial Issuance of Badges for Construction Personnel

- The regulation at 10 CFR 73.52(d) requires CP holders and combined licensees to establish, implement, and provide a badge program. Identification badges with photographs shall be required to gain access to the areas with security- and safety-related SSCs. This is a one-time cost of \$12,000 per licensee that includes \$8,000 for the purchase and setup of the badge machine and a cost of \$1 per badge.

Impact: Barrier

- The regulation at 10 CFR 73.53(d) requires CP holders and combined licensees to install a barrier to implement the access control requirements. This is a one-time cost of \$175,000 per licensee for a 5,000-linear-foot barrier at an installation cost of \$35 per foot.

Impact: One-time Equipment Cost

- The regulation at 10 CFR 73.52(d) requires each CP holder and combined licensee to meet specific security requirements. To fulfill these requirements, the NRC estimates that the licensees would obtain equipment, including a trailer, computer, safe, cabinets, patrol vehicles, radios, flashlights, uniforms, mirrors, hand-held metal detectors, and lockers. This is a one-time cost of \$197,150 per licensee.

Impact: Letter Notifying the NRC of Onsite Work on Security- and Safety-Related SSCs

- The regulation at 10 CFR 73.52(f) requires the licensee to report to the NRC the scheduled onsite in-place setting, installation, or erection of security- and safety-related SSCs in the areas in which they will be operated. This is a one-time cost of \$4,000 per licensee. This effort will require 40 labor hours to complete.

Impact: Letter Notifying the NRC of the Scheduled Implementation of Lockdown Procedures

- The regulation at 10 CFR 73.52(f) requires the licensee to report to the NRC the scheduled implementation of lockdown procedures, including the commencement of security sweeps. This is a one-time cost of \$4,000 per licensee. This effort will require 40 labor hours to complete.

NRC Implementation

Impact: Review of the Licensee Written Construction Security Plan

- This is a \$168,980 one-time cost to the NRC per licensee. This effort will require 1,420 labor hours per construction security plan to complete the review. The effort will require the development of a template for the construction security safety evaluation report (80 hours), a written construction security standard review plan (80 hours), security plan reviews (700 hours), and the development of the safety evaluation report (560 hours).

Impact: Review of the Licensee Letter Notifying the NRC of Onsite Work on Security- and Safety-Related SSCs

- This is a \$9,520 one-time cost to the NRC per licensee. This effort will require 80 labor hours per letter to complete.

Impact: Review of the Licensee Letter Notifying the NRC of the Implementation of Lockdown Procedures

- This is a \$9,520 one-time cost to the NRC per licensee. This effort will require 80 labor hours per letter to complete.

Industry Operation

Impact: Report Changes to the Construction Security Plan

- The regulation at 10 CFR 50.54(ii)(2) allows the licensee to make changes to its construction security plan without prior Commission approval if the changes do not decrease the effectiveness of the plan. The licensee shall maintain records of construction security plan changes made without prior Commission approval and shall submit a report containing a description of each change within 60 calendar days after the change is made. The NRC estimates that each licensee will submit one report annually. This is an \$8,000 annual cost per licensee.

Impact: Annual Independent Review of Construction Security Plan and Findings Report

- The regulation at 10 CFR 50.54(ii)(3) requires the licensee to 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. These reports must be maintained in an auditable form and made available for inspection. This is a \$4,200 annual cost per licensee. This effort will require 42 labor hours per licensee to review all plan elements, consider management's findings on the effectiveness of the plan, assess actions taken from prior plan reviews, document the results, and report the findings.

Impact: Corrective Action Program

- The regulation at 10 CFR 50.54(ii)(5) requires licensees to track, trend, and document the actions taken to correct and prevent the recurrence of failures and deficiencies in the construction access authorization and physical protection program. This is a \$4,000 annual cost per licensee. This effort will require 40 labor hours per review.

Impact: Construction Access Program

- The regulation at 10 CFR 73.52(d)(1)(ii)(A)(1)(i) requires licensees constructing nuclear power plants to collect and review construction worker demographic data as a precondition for initial access to construction areas with security- and safety-related SSCs. Collected demographic information must be electronically submitted to the NRC, and the results must be reviewed. The NRC estimates that the maximum construction workforce is 4,000 workers per construction site and that it would take 2 hours to collect, review, process each worker, and transmit the data file to the NRC. This is a \$280,000 annual cost per licensee to support the reviewing officials who will oversee and perform many of the functions required by the site access authorization requirements during nuclear power plant construction.

Impact: Badge Program

- The regulation at 10 CFR 73.52(d) requires the licensee to establish, implement, and provide a badge program. Identification badges with photographs would be required to gain access to the areas with security- and safety-related SSCs. This is a \$5,500 annual cost per licensee that includes an estimated 45 hours of labor for badge issuance and \$1,000 for badge maintenance per year.

Impact: Site Physical Security Requirements

- The regulation at 10 CFR 73.52(d) requires the licensee to implement physical security requirements for the deterrence of malicious acts, including onsite surveillance at the nuclear reactor construction site, assessment and reporting procedures for incidences of malicious acts during construction, and a construction site security force composed of personnel to implement measures in accordance with the construction security plan. The licensee shall have physical security measures in place to control access and channel personnel, vehicles, and materials to planned access portals into the controlled construction access area. The licensee would establish a personnel, vehicle, and material search and inspection process to deter the introduction of unauthorized firearms, explosives, and incendiary devices. This is an annual cost of \$1,747,200 per licensee. The labor cost for this effort is associated with a physical security workforce on duty 24 hours per day. The NRC estimates that the costs associated with attrition and training will add an additional 12.5 percent.

Impact: Demonstration of a Site's Ability To Meet Security Requirements

- The regulation at 10 CFR 73.52(b)(3) requires the licensee constructing a nuclear power plant to demonstrate, upon the request of an authorized NRC representative, its ability to meet NRC requirements through the implementation of the construction security plan, including the ability of personnel to perform the assigned duties and responsibilities required by the construction security plan and licensee procedures. This is an annual cost of \$8,000 per licensee. The NRC estimates that each construction site will require 80 hours to prepare, demonstrate, and follow up on inquiries from the NRC. The NRC assumes that this request will occur once a year at each construction site.

Impact: Recordkeeping

- This is a \$12,000 annual cost per licensee. This effort will require 120 hours of effort annually. The NRC estimates that this effort will require 10 hours per month for the 4 years of construction and an additional 3 years after the site becomes operational.

NRC Operation

Impact: Review of Reports on Changes to the Construction Security Plan

- This is a \$9,520 annual cost to the NRC per licensee. This effort will require 80 labor hours per report. The NRC estimates that each licensee will submit an average of two reports annually.

Impact: Review of Demographic Data Check Reports

- This is a \$9,520 annual cost to the NRC per licensee. This effort will require 80 labor hours per report. The NRC estimates that each licensee will submit an average of two reports annually.

Impact: Inspection To Verify the Licensee's Ability To Demonstrate Its Ability To Meet Security Requirements

- This is a \$9,520 annual cost to the NRC per licensee. This effort will require 80 labor hours per licensee. The NRC estimates that it will inspect each licensee an average of once a year.

Exhibit 3-1
Quantitative Results
(Total Present Value for the Cost Associated
with the Project Life of One Plant)
 Value (+) or Impact (-)

	One-time Startup Costs	Total Startup Costs	Annual Operating Cost	*Total Project Cost with 3% Discount Rate	*Total Project Cost with 7% Discount Rate
Industry	\$504,150	\$504,150	\$2,068,900	\$8,194,455	\$7,511,951
NRC	\$188,020	\$188,020	\$188,020	\$886,909	\$824,883
Total	\$692,170	\$692,170	\$2,256,920	\$9,081,364	\$8,336,834

* The total project equals a 4-year construction timeframe.

Exhibit 3-2
Quantitative Results
(Total Present Value for the Cost Associated
with the Project Life of All Plants)
 Value (+) or Impact (-)

	One-time Startup Costs	Total Startup Costs	Annual Operating Cost	Total Annual Operating Cost	*Total Project Cost with 3% Discount Rate	*Total Project Cost with 7% Discount Rate
Industry	\$504,150	\$7,058,100	\$2,068,900	\$28,964,600	\$114,722,368	\$105,167,319
NRC	\$188,020	\$2,632,280	\$28,560	\$399,840	\$4,118,525	\$3,986,623
Total	\$692,170	\$9,690,380	\$2,097,460	\$29,364,440	\$118,840,893	\$109,153,942

* The total project equals a 4-year construction timeframe.

4. Presentation of Results

4.1 Values and Impacts

This section summarizes the values (benefits) and impacts (costs) estimated for these regulatory options. (Section 3.3 presents a more detailed analysis.) To the extent that the affected attributes could be analyzed quantitatively, the net effect of each option has been calculated and is presented below. However, some values and impacts could be evaluated only on a qualitative basis.

Exhibit 4-1 summarizes the results of the value-impact analysis. Relative to the no-action alternative (Option 1), Option 2 would result in a net quantitative impact estimation of \$118,840,893 over a 4-year period at a 3-percent discount rate and \$109,153,942 over a 4-year period at a 7-percent discount rate.

Exhibit 4-1
Summary of Values and Impacts at a Discount Rate of 3 Percent

Regulatory Option	Net Value (+) or Impact (-) (Total Present Value)	Qualitative Values/Impacts
Option 1: No Action	\$0	Not Applicable
Option 2: Proposed Action	<u>Industry:</u> \$114,722,368 <u>NRC:</u> \$4,118,525	<u>Values:</u> <i>Occupational Health (Accidents)</i> —The action would reduce the risk that occupational health will be affected by radiological releases resulting from radiological sabotage. <i>Public Health (Accidents)</i> —The proposed action would reduce the risk that public health will be affected by radiological releases resulting from radiological sabotage. <i>Offsite Property</i> —The proposed action would reduce the risk that offsite property will be affected by radiological releases resulting from radiological sabotage. <i>Onsite Property</i> —The proposed action would reduce the risk that onsite property will be affected by radiological releases. <u>Impacts:</u> None

4.2 Backfit Analysis

The NRC has determined that, except for possibly 2 cases, the backfit rule, 10 CFR 50.109, and comparable provisions in 10 CFR part 52, do not apply to this proposed rule and, therefore, a backfit analysis is not required, because the proposed rule does not contain any provisions which either impose backfitting as defined in the backfit rule or is otherwise inconsistent with any of the comparable backfitting and finality provisions in part 52. The proposed access authorization and physical protection requirements apply only to nuclear power plant construction performed under a construction permits or a combined license. The backfitting issues for construction permits and combined licenses are discussed below.

The access authorization and physical protection during nuclear power plant construction rule applies to construction permits issued after the effective date of the rule. To the extent that the access authorization and physical protection during nuclear power plant construction rule revises the requirements for future construction permits, the requirements do not constitute backfitting, because the requirements in the proposed access authorization and physical protection during nuclear power plant construction rule are prospective in nature and effect. The backfit rule was not intended to apply to every NRC action which substantially changes the expectations of future applicants under 10 CFR part 50. There are no current holders of construction permits or any expected to be issued before the effective date of the final rule or for several years thereafter. There are two plant sites who have begun construction under construction permits but whose construction permits were placed in deferred status at the permit holder's request. Although the NRC does not expect either of these deferred construction permits to apply for reactivation before the effective date of the final rule should this possibility occur, the proposed rule would apply. One of these sites is in discussion with the NRC regarding activities necessary to reactivate its construction permit. However, this partially constructed nuclear power plant site is located within an existing protected area of a nuclear power facility subject to the requirements of 10 CFR 73.55. If the NRC approves the reactivation of this plant's construction permit before the effective date of the final rule, the construction site already meets the requirements of the proposed rule under proposed § 73.52(a)(3) and therefore the requirements of the proposed rule do not constitute backfitting. The NRC has not been notified that the second plant with a construction permit in deferred status plans to reactivate its construction permit. This situation would raise backfit concerns should it occur and is addressed below.

The NRC is reviewing 13 COL applications with the first combined license scheduled to be issued after the scheduled effective date of the final rule. Therefore there is no backfitting of current or expected future holders of combined licenses. The NRC does recognize, however, that these schedule dates could change. If the first COL is issued before the effective date of the final rule, this situation would raise a backfit concern, which is addressed below.

Although neither situation is anticipated to occur, the NRC assumed for this backfit analysis that one CP holder would request the reinstatement of their CP for their facility in a deferred plant status that is not located within an existing protected area of a nuclear power facility and one combined license applicant would receive their COL before the final rule becomes effective.

This new proposed rule to address the requirements for access authorization and physical protection during nuclear power plant construction is based both on enhanced public health and enhanced safety and common defense and security but is not necessary for adequate protection. Rather, it would be to enhance the facility's inherent robustness. The NRC also evaluated the aggregated set of requirements that constitute backfits in accordance with 10 CFR 50.109 to determine if the costs of implementing the rule would be justified by a substantial increase in public health and safety or the common defense and security. In performing this analysis, the NRC considered the quantitative and qualitative costs and benefits of the rule, as discussed below.

For the two nuclear power plant construction site that were postulated to have backfit issues, these backfits would mean an initial one-time cost of approximately \$500,000 for each site followed by annual costs of about \$2.1 million per site. The NRC estimates that the backfits would result in a total cost of approximately \$1 million in one-time costs and about \$4.2 million in annual costs. The NRC considered access authorization and physical protection benefits in quantitative terms during nuclear power plant construction afforded by the proposed rule's provisions, as documented in Section 4.1 of the regulatory analysis. The NRC also qualitatively determined whether the costs of the rule would be justified in light of the construction security benefits. In contrast, the NRC evaluated costs in quantitative terms, as documented in Section 4.1 to the regulatory analysis. In performing this analysis, the NRC considered the following nine factors in 10 CFR 50.109:

(1) Statement of the Specific Objectives That the Proposed Backfit Is Designed To Achieve

This proposed rulemaking aims to introduce access authorization and physical protection regulations pertaining to nuclear power reactors under construction.

The objectives of the proposed rule are as follows:

- Deter malicious acts to security- and safety-related SSCs during nuclear power plant construction. These actions would substantially enhance security at nuclear power plant construction sites by providing mechanisms to deter and detect malicious acts during construction that could later be used to cause or facilitate a radiological sabotage event during plant operation.
- Detect malicious acts to security- and safety-related SSCs after the implementation of lockdown procedures. These actions would substantially enhance security at nuclear power plant construction sites by providing mechanisms to deter and detect malicious acts during construction that could later be used to cause or facilitate a radiological sabotage event during plant operation.
- Enhance nuclear plant construction security by codifying improvements to requirements in the following areas:
 - physical protection measures
 - access authorization controls

- physical inspections
- security sweeps
- lockdown measures and procedures for securing the security- and safety-related SSCs

(2) General Description of the Activity That Would Be Required by the Licensee or Applicant To Complete the Backfit

In general terms, the proposed rule would ensure that the CP holder who reactivated its construction permit and the combined licensee who received its combined license before the effective date of the final rule consistently implement new access authorization and physical protection measures during the construction of nuclear power plants. Section 3.3 of this regulatory analysis presents a detailed analysis of the activities and procedural changes required by the proposed rule. Each of the following backfits generally described below would potentially affect only these two construction sites:

- Written Construction Security Plan

The proposed rule language would require CP holders and combined licensees to submit and maintain a written construction security plan with the proposed implementation schedule and proposed milestones for NRC review and approval.

- Detailed Site-Specific Security Procedures

The proposed rule language would require CP holders and combined licensees to develop, approve, and maintain procedures, training, and guidance for implementing the construction security plan to ensure that plant construction security is clear and conveys the construction protective measures deemed appropriate.

- Construction Site Badge Program

The new measures would require CP holders and combined licensees to establish a construction site badge program to provide the appropriate identification of personnel who are granted construction site access or those in visitor status who are authorized to be in the area.

- Construction Site Barrier

The proposed rule would require CP holders and combined licensees to establish and place a site barrier(s) to maintain a clear separation of the controlled access construction area occupied by security- and safety-related SSCs from the surrounding area and to facilitate the conduct of access controls. Licensees and CP holders may already have a construction site barrier(s) via a voluntary initiative that accomplishes the intent of the proposed rule. Licensees, however,

would need to review and confirm or (if necessary) revise the existing site barrier to reflect the revised rule.

- Annual Independent Review of the Construction Security Plan

The proposed rule would require CP holders and combined licensees to review the effectiveness of the construction security plan using independent personnel who are not regularly associated with the management and day-to-day implementation of the construction security plan. The proposed rule would also require licensees to implement and compile a report of the results, inform the licensee corporate management of those results, and keep the annual effectiveness evaluation in a form that is available for subsequent inspection by the NRC.

- Corrective Action Program

The proposed rule would require CP holders and combined licensees to identify and correct failures and deficiencies discovered in the construction security plan using the corrective action operational program.

- Construction Access Program

The proposed rule would require CP holders and combined licensees to establish a construction access program, procedures, and training to certify, grant, deny, unfavorably terminate, or maintain a construction worker's access to the construction site.

- Demographic Data Checks

The proposed rule would require CP holders and combined licensees to verify a construction worker's identity before granting him or her access to the controlled access construction areas following the issuance of the construction security plan. At a minimum, CP holders and combined licensees must validate the individual's identity by evaluating an accumulation of information developed from other background investigation sources (e.g., previous employment records and personal references). The CP holders and combined licensees must also conduct a semiannual NRC demographic data check for all personnel that had access to areas with security and safety-related SSCs within the last 365 days. Licensees and CP holders must electronically submit demographic data compiled for initial construction site access and for biennial data checks to the NRC within 10 days.

- Site Physical Security Requirements

The proposed rule would require CP holders and combined licensees to establish and maintain a construction security force that is staffed, trained, and equipped to implement the construction security plan. CP holders and combined licensees may already have a construction security force via a voluntary initiative that

accomplishes the intent of the proposed rule. CP holders and combined licensees, however, would need to review and confirm whether the existing construction site security force is sufficient to implement the intent of the proposed rule.

(3) Potential Change in the Risk to the Public from the Accidental Offsite Release of Radioactive Material

This rulemaking would enhance the construction sites' security robustness which would reduce the likelihood of core damage or spent fuel damage resulting from malicious acts. The rulemaking will provide added assurance that the risk resulting from malicious acts during construction remains acceptably low by providing mechanisms to detect and deter malicious acts during construction that could have a latent or delayed effect and could potentially cause a radiological sabotage event during plant operation.

(4) Potential Impact on Radiological Exposure of Facility Employees

This rulemaking would enhance the construction sites' security robustness which would reduce the likelihood of core damage or spent fuel damage. The rulemaking will provide added assurance that the risk resulting from malicious acts during construction remains acceptably low by providing mechanisms to detect and deter malicious acts during construction that could have a latent or delayed effect and could potentially cause a radiological sabotage event during plant operation.

(5) Installation and Continuing Costs Associated with the Backfit, Including the Cost of Facility Downtime or the Cost of Construction Delay

The backfit analysis for the proposed rule provides the NRC's estimate of the initial costs for implementing the major elements of the proposed rule during nuclear power plant construction. The estimated one-time industry net cost associated with the backfits for the two postulated sites would be approximately \$1.0 million (or approximately \$500,000 for each site), and the recurring annual cost during construction would be approximately \$4.2 million (or approximately \$2.1 million for each site). Combining these initial and annual costs, this analysis estimates that the backfits associated with the proposed rule would cost industry approximately \$15.6 million (present value, assuming a 7-percent discount rate) or \$17.0 million (present value, assuming a 3-percent discount rate).

(6) Potential Safety Impact of Changes in Plant or Operational Complexity, Including the Relationship to Proposed and Existing Regulatory Requirements

The proposed rule is not expected to require changes with respect to the design of a nuclear power plant. This rule is not expected to have a significant effect on operational complexity because all features required by the rule occur during plant construction.

(7) Estimated Resource Burden on the NRC Associated with the Proposed Backfit and the Availability of Such Resources

The majority of the one-time costs incurred by the NRC are to review the construction security plans and construction personnel demographic data submitted by the CP holder and the combined licensee and to perform inspections of the reactivated CP holder and the combined licensee site. The NRC will incur additional costs for reviewing and approving construction security plans, processing and reviewing submitted licensee demographic data for initial construction site badging, and developing inspection procedures and inspecting the implementation of construction security plans. These activities would result in one-time costs of approximately \$33,000. The NRC will incur annual operation costs for reviewing biennial demographic submittals and construction security plan updates, evaluating changes that a licensee makes to its emergency plan that may decrease its effectiveness, and performing site inspections to assess construction security plan implementation. These activities would result in annual costs of approximately \$19,000.

(8) Potential Impact of Differences in the Facility Type, Design, or Age on the Relevancy and Practicality of the Proposed Backfit

For nuclear power reactor CP holders and combined licensees, the construction security requirements in the proposed rule would not directly relate to the facility type, design, or age. Benefits and costs attributable to the proposed rule may vary for a variety of site-specific reasons and are based on the percentage of construction completed when the construction security plan is implemented. The NRC does not believe the benefits and costs will vary significantly based on the facility type, design, or age of the nuclear power reactor.

(9) Whether the Proposed Backfit Is Interim or Final and, If It Is Interim, the Justification for Imposing the Proposed Backfit on an Interim Basis

The proposed backfit would be final when it is implemented at the final rule stage.

In light of the substantial benefits of the proposed rule as summarized in Section 4.1, the NRC finds that the backfits contained in the proposed rule, when considered in the aggregate, would constitute a substantial increase in public health and safety, in promoting the common defense and security, and in protecting the environment

5. Decision Rationale

The decision rationale is based on the main analysis. Relative to the no-action alternative, Option 2 would result in a net cost estimated at approximately \$106,157,327 (total present value over the 4-year construction period) assuming a 7-percent discount rate, or approximately \$115,763,363 assuming a 3-percent discount rate. Offsetting the net cost, the NRC believes that Option 2 would result in substantial nonquantified benefits related to safety and security. Although significant costs are incurred as a result of the rule, the qualitative benefits associated with the rule outweigh its cost. The NRC believes that the rule is cost-justified because the proposed regulatory initiatives for increased and consistent access authorization and physical protection measures during nuclear power plant construction would deter and detect malicious activities that could compromise the safe construction and subsequent operation of facilities and would therefore increase public health and safety, promote the common defense and security,

and protect the environment. If the proposed regulations were not enforced, the NRC could be unaware, for extended periods of time, of whether the construction security plans and their implementation are adequate to protect public health and safety, promote the common defense and security, and protect the environment. Without a timely review of information, changes to personnel, procedures, equipment, and facilities or a failure to maintain and implement an effective construction security plan could adversely affect the CP holder's or combined licensee's ability to deter and detect malicious activities during nuclear power plant construction.

6. Implementation

The staff proposes to make the final rule effective 30 days after its publication in the *Federal Register*. For this analysis, the final rule effective date is December 2011. Applicants for a COL who have a docketed application and COL holders before the effective date of the final rule would be permitted to defer implementation of the final rule until 6 months after the effective date of the final rule.

7. References

1. NUREG/BR-0184, "Regulatory Analysis Technical Evaluation Handbook, Final Report," U.S. Nuclear Regulatory Commission, Washington, DC, January 1997.
2. NUREG/BR-0058, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," Revision 4, U.S. Nuclear Regulatory Commission, Washington, DC, September 2004.

U.S. NUCLEAR REGULATORY COMMISSION
ENVIRONMENTAL ASSESSMENT AND FINDING OF
NO SIGNIFICANT IMPACT FOR THE
PROPOSED RULE AMENDING 10 CFR PARTS 50, 52, and 73
ACCESS AUTHORIZATION AND PHYSICAL SECURITY FOR
NUCLEAR POWER PLANT CONSTRUCTION

Introduction and Background

Current U.S. Nuclear Regulatory Commission (NRC) regulations do not include requirements for access authorization or physical protection at construction sites for nuclear power plant construction before the receipt of nuclear fuel (protected area) under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, “Domestic Licensing of Production and Utilization Facilities,” or after receiving notice of the Commission’s finding under 10 CFR 52.103(g) that the acceptance criteria in the combined license are met. Although licensees may provide industrial or commercial security during construction to reduce commercial risk, the lack of required security measures before the receipt of fuel is inconsistent with the potential security risk stemming from malicious acts that could occur during the construction of nuclear power plants. This omission could result in an inadequate level of assurance of a licensee’s ability during construction to deter or detect malicious acts that could adversely affect the safe construction and subsequent operation of security- and safety-related systems and components (SSCs) at NRC-regulated commercial nuclear power plants.

The objective for this rulemaking is to substantially enhance security at new nuclear power plant construction sites by providing mechanisms to deter and detect malicious acts during construction that could later be used to cause or facilitate a radiological sabotage event during plant operation.

The staff recognizes that existing required activities conducted by licensees during the plant construction period (e.g., robust designs, safety-related quality assurance programs, and pre-operational testing) provide some measure of security at new nuclear power plant construction sites. NRC oversight activities at these construction sites also provide some additional degree of assurance that malicious acts would be deterred or detected. Further, the staff recognizes that industry voluntarily implements certain industrial security measures at their construction sites to protect their commercial interests. However, these existing requirements and voluntary licensee programs do not provide assurance that the public health and safety, common defense and security, and the environment are adequately protected.

In response to these concerns, the Commission directed the staff to initiate a rulemaking establishing access authorization and physical protection requirements for new reactor sites under construction and to develop measures to deter and detect malicious acts before the arrival of fuel onsite (protected area) and the plant's transition into its operational phase.

As part of the development process for the enhanced security measures, the NRC considered the effectiveness, costs, and feasibility of possible access authorization and physical protection enhancements.

Proposed Action

The NRC is proposing to amend its regulations to create a new 10 CFR 73.52 and make conforming amendments to other NRC regulations to incorporate effective access authorization and physical protection measures for the protection of new nuclear power plant construction activities under a construction permit or a combined license. The NRC considers the potential for malicious acts during nuclear power plant construction to be risk significant. Accordingly, the NRC is proposing new physical protection measures; access authorization controls; physical inspections; performance of high-quality security sweeps; and lockdown measures and

procedures for securing the security- and safety-related SSCs at new nuclear power plant construction sites before the facility becomes operational.

New requirements for an access authorization program are proposed to ensure that construction personnel who have access to construction areas with security- or safety-related SSCs have gone through pre-access screening checks and are determined to be trustworthy and reliable. New requirements are also proposed to establish physical protection to deter malicious acts to security- and safety-related SSCs during construction activities and to detect malicious acts to security- and safety-related SSCs after the implementation of lockdown procedures. Once the rule becomes effective, the proposed amendments would impact any construction permit holder or combined licensee that is authorized to construct a nuclear power plant under 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," or after receiving notice of the Commission's finding under 10 CFR 52.103(g) that the acceptance criteria in the combined license are met.

The proposed rule would neither authorize nor license the use of any radioactive materials; licensees and applicants would still need to comply with all applicable NRC licensing requirements. There are 18 applications for combined licenses (COLs) for new nuclear power plants (13 applications for 22 units are under active review while five applications have been suspended or deferred) as well as activities of the Tennessee Valley Authority which is completing construction of Watts Bar, Unit 2 and is evaluating whether to complete its Bellefonte units. The NRC does not expect any additional COL applications to be submitted until fiscal year 2012. Although a second wave of commercial nuclear power plants have not materialized, the licensing and construction of these new COL plants may become the impetus for new COL applications.

Need for the Proposed Action

The proposed requirements are needed to provide enhanced security at new reactor construction sites so that the Commission has adequate assurance that malicious acts during construction cannot later reasonably result directly or indirectly in radiological sabotage as defined in 10 CFR 73.2. The rule provides the Commission with adequate assurance that the public health and safety and the common defense and security are adequately protected given the current threat environment.

Environmental Impact

This environmental assessment focuses on those aspects of the access authorization and physical protection for nuclear power plant construction rulemaking where there is a potential for the requirements to affect the environment. This proposed action would impose new security requirements on a number of the NRC construction permit holders and combined licensees. However, in no case would this proposed amendment to the NRC's regulations authorize the possession or use of radioactive material. Licensees would remain subject to all applicable existing licensing requirements in the NRC's regulations. The NRC has concluded that there will be no significant environmental impacts associated with implementation of these rule requirements.

The access authorization and physical protection requirements for nuclear power plants during construction would not result in changes to the systems in affected licensees' facilities that function to limit the release of radiological effluents. All systems associated with limiting the releases of offsite radiological effluents will continue to be able to perform their functions, and as a result, there are no significant radiological effluent impacts. The standards and requirements applicable to radiological releases and effluents are not affected by this proposed rulemaking and continue to apply.

The principal effect of this action is to add access authorization and physical protection requirements during nuclear power plant construction. None of the revisions affect current occupational exposure requirements. Consequently, the NRC has concluded that this action has no impact on occupational exposure.

The proposed action does not significantly increase the probability or consequences of accidents, nor result in changes being made in the types of any effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure.

With regard to potential nonradiological impacts, implementation of the rule requirements does not have a significant impact on the environment. Facility footprints should not change due to the proposed action. While the requirements of this rule could result in some licensees making temporary modifications to their facilities during initial construction activities, the NRC does not anticipate these modifications to have any significant environmental impact. In addition, the requirements do not affect any historic site and do not affect nonradiological plant effluents. Consequently, there are no significant non-radiological plant effluents. Therefore, there is no significant non-radiological environmental impact associated with this rule.

Accordingly, the NRC concludes that there is no significant environmental impact associated with the rulemaking action.

Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered not taking the action (i.e., the no-action alternative). Under the no-action alternative, the NRC would not amend its regulations to require access authorization and physical protection features during nuclear power plant construction. Not adopting the access authorization and physical protection regulations results in no change in current environmental impacts because the existing requirements and resulting environmental impact would not change. Therefore, taking no action results in no net change to the environmental impact. However, the no-action alternative would

leave the existing security issues during nuclear power plant construction unresolved and would not reflect the requirements that the NRC has concluded are necessary for the adequate protection of the public health and safety and the common defense and security.

Alternative Use of Resources

There are no irreversible commitments of resources determined in this assessment.

Agencies and Persons Consulted

No agencies or persons outside the NRC were contacted in connection with the preparation of this draft environmental assessment.

Finding of No Significant Impact

Under the National Environmental Policy Act of 1969, as amended, and the NRC regulations in subpart A of 10 CFR Part 51, the NRC has determined that this proposed rule, if adopted, would not be a Federal action significantly affecting the quality of the human environment and, therefore, an environmental impact statement is not required for this rulemaking. The proposed amendments are procedural in nature and would have no significant impact on the environment.

The determination of this environmental assessment is that there will be no significant impact to the public from this action. However, the general public should note that the NRC welcomes public participation. Comments on any aspect of the environmental assessment may be submitted to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attn: Rulemakings and Adjudications Staff.