



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

October 27, 2005

SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM: SECY-05-0106

TITLE: PROPOSED RULEMAKING TO REVISE 10 CFR 73.1,  
DESIGN BASIS THREAT (DBT) REQUIREMENTS

The Commission (with all Commissioners agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of October 27, 2005.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in black ink, appearing to read "Annette L. Vietti-Cook", written over a horizontal line.

Annette L. Vietti-Cook  
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Diaz  
Commissioner McGaffigan  
Commissioner Merrifield  
Commissioner Jaczko  
Commissioner Lyons  
OGC  
EDO  
PDR

SECY NOTE: This Commission Voting Record will be released to the public 5 working days after dispatch of the letter to the petitioner.

VOTING SUMMARY - SECY-05-0106

RECORDED VOTES

|                  | APRVD | DISAPRVD | ABSTAIN | NOT<br>PARTICIP | COMMENTS | DATE     |
|------------------|-------|----------|---------|-----------------|----------|----------|
| CHRM. DIAZ       | X     |          |         |                 | X        | 8/17/05  |
| COMR. McGAFFIGAN | X     |          |         |                 | X        | 10/14/05 |
| COMR. MERRIFIELD | X     |          |         |                 | X        | 7/18/05  |
| COMR. JACZKO     | X     |          |         |                 | X        | 8/19/05  |
| COMR. LYONS      | X     |          |         |                 | X        | 7/27/05  |

COMMENT RESOLUTION

In their vote sheets, all Commissioners approved the staff's recommendation and provided some additional comments. Subsequently, the comments of the Commission were incorporated into the guidance to staff as reflected in the SRM issued on October 27, 2005.

SECY NOTE:

This Commission Voting Record will be released to the public 5 working days after dispatch of the letter to the petitioner.

NOTATION VOTE  
RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: CHAIRMAN DIAZ  
SUBJECT: **SECY-05-0106 - PROPOSED RULEMAKING TO REVISE 10 CFR 73.1, DESIGN BASIS THREAT (DBT) REQUIREMENTS**

Approved *[initials]* Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_  
Not Participating \_\_\_\_\_

COMMENTS:

I join Commissioners Merrifield and Lyons in commending the staff on their efforts to develop a proposed rule for public comments on DBT attributes. I approve the proposed publication subject to the attached edits and changes.

*[Signature]*  
SIGNATURE

Aug 17, 05  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

CHAIRMAN REC'D  
05 JUN 16 PM 3:14

NUCLEAR REGULATORY COMMISSION

10 CFR Part 73

RIN 3150-AH60

Design Basis Threat

AGENCY: Nuclear Regulatory Commission

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations that govern the requirements pertaining to design basis threat (DBT). **The proposed rule would amend 10 CFR 73.1 (a) to make generically applicable the security requirements previously imposed by the Commission's April 29, 2003 DBT orders, which applied to existing licensees, and redefine the level of security requirements necessary to ensure that the public health and safety and common defense and security are adequately protected.** ~~The proposed amendment would consolidate the existing DBT requirements in § 73.1(a) with the supplemental DBT requirements put in place by Commission orders issued on April 29, 2003 (68 FR 24517, 68 FR 26675, 68 FR 26676). The specific details related to the threat, which contain both safeguards information (SGI) and classified information, are consolidated in adversary characteristics documents (ACDs) that are not publicly available. These documents include specific details of the attributes of the threat consistent with the requirements imposed in the April 29, 2003, DBT orders.~~ The proposed rule would revise the DBT requirements for radiological sabotage (applied to power reactors and Category I fuel cycle facilities pursuant to § 73.55(a) and § 73.20(a) respectively), and theft or diversion of NRC-licensed Strategic Special Nuclear Material (SSNM) (applied to Category I fuel cycle facilities pursuant to § 73.20(a)). The NRC has developed draft Regulatory Guides (RGs) that provide guidance **to licensees** concerning the DBT for radiological sabotage and theft and diversion. These draft RGs have limited

distribution because they contain either safeguards or classified information. The specific details related to the threat, which contain both safeguards information (SGI) and classified information, are consolidated contained in adversary characteristics documents (ACDs) that are not publicly available. These documents include specific details of the attributes of the threat consistent with the requirements imposed in the April 29, 2003, DBT orders. Additionally, a Petition for Rulemaking (PRM -73-12), filed by the Committee to Bridge the Gap, was considered as part of this proposed rulemaking; the NRC's disposition of this petition is contained in this document.

DATE: Submit comments by [insert date 75 days after publication in the *Federal Register*.] Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may submit comments by any one of the following methods. Please include the following number RIN 3150-AH60 in the subject line of your comments. Comments on rulemakings submitted in writing or in electronic form will be made available for public inspection. 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.

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

E-mail comments to: [SECY@nrc.gov](mailto:SECY@nrc.gov). If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at (301) 415-1966. You may also submit comments via the NRC's rulemaking web site at <http://ruleforum.llnl.gov>. Address questions

## I. Background

The DBT requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. These NRC requirements include protection against radiological sabotage (generally applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed SSNM (generally applied to Category I fuel cycle facilities). ~~Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM.~~ The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans.

Following the terrorist attacks on September 11, 2001, the NRC conducted a thorough review of security to ensure that nuclear power plants and other licensed facilities continued to have effective security measures in place for the changing threat environment. In so doing, the NRC recognized that some elements of the DBTs required enhancement due to the escalation of the domestic threat level. After soliciting and receiving comments from Federal, State, local agencies, and industry stakeholders, the NRC imposed by order supplemental DBT requirements ~~which that~~ contained additional detailed adversary characteristics. ~~The balance between licensee responsibilities and the responsibilities of the local, State and Federal Governments was considered during the development of the April 29, 2003, DBT orders.~~ ~~The Commission deliberated on the responsibilities of the local, State, and Federal governments to protect the nation, and the responsibility of licensees to protect individual nuclear facilities, before reaching consensus on a reasonable approach to security in the April~~

29, 2003 DBT orders. After gaining experience under the orders over the past two years, the Commission believes that attributes of the orders should be generically imposed.

The Commission's decision was based on the analysis of intelligence information regarding the trends and capabilities of the potential adversaries and discussions with Federal, law enforcement, and intelligence community agencies. These enhanced adversary characteristics are reflective of the new threat environment and are described in the April 29, 2003, DBT orders. In general terms, DBTs are comprised of attributes selected from the overall threat environment. The ACDs set forth the specific details of the attributes of the DBTs. The DBT technical basis document contains a basis for the specific adversary characteristics. These supplemental documents contain safeguards and classified information, and therefore, are withheld from public disclosure and only distributed on a need-to-know basis to persons with authorized access that is distributed only to persons with authorized access and on a need-to-know basis. The NRC's DBT is not based on worst-case scenarios but rather on actual demonstrated adversary characteristics demonstrated worldwide and a determination as to those characteristics against which a private security force could reasonably be expected to provide protection.

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders resulted required in licensees to make security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site

access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening of temporary and permanent workers. The NRC has reviewed and approved the revised security plans that were developed and submitted by power reactor and Category I fuel cycle facility licensees in response to the April 2003 orders. Currently, all power reactor and Category I fuel facilities have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.



## II. Rulemaking Initiation

On July 19, 2004, the staff issued a memorandum entitled "Status of Security-Related Rulemaking" to inform the Commission of plans to close two longstanding security-related actions and replace them with a comprehensive rulemaking plan to modify physical protection requirements for power reactors. This memorandum described rulemaking efforts that were preempted by the terrorist activities of September 11, 2001, and summarized the security-related actions taken following the attack. In response to this memorandum, the Commission directed the staff in an August 23, 2004, Staff Requirements Memorandum (SRM), to forego the development of a rulemaking plan and provide a schedule for the completion of 10 CFR 73.1, 73.55, and Part 73 Appendix B rulemakings. The requested schedule was provided to the Commission by memorandum dated November 16, 2004.

## III. Proposed Regulations

The principal objectives of the proposed rule are to make generically applicable the security requirements previously imposed by the Commission's April 29, 2003 DBT orders, and to define in NRC regulations the level of security necessary to ensure adequate protection of the public health and safety and common defense and security revision to the § 73.1(a) DBT rule is to consolidate the supplemental requirements put in place by the April 29, 2003, DBT orders with the existing DBTs requirements in § 73.1(a) in an expedited manner. During the development of this rule the staff identified several potential changes to the regulations that are not proposed at this time and which the staff does not consider necessary at this time to assure safety or security.

The Commission has considered and will consider many factors in developing the proposed DBT and other security requirements. As directed by Congress under section 651 (a) of the recently enacted Energy Policy Act of 2005, the NRC is giving consideration to the following 12 factors as part of this rulemaking to revise the design basis threats:

1. The events of September 11, 2001;
2. An assessment of physical, cyber, biochemical, and other terrorist threats;
3. The potential for attack on facilities by multiple coordinated teams of a large number of individuals;
4. The potential for assistance in an attack from several persons employed at the facility;
5. The potential for suicide attacks;
6. The potential for water-based and air-based threats;
7. The potential use of explosive devices of considerable size and other modern weaponry;

8. The potential for attacks by persons with a sophisticated knowledge of facility operations;

9. The potential for fires, especially fires of long duration;

10. The potential for attacks on spent fuel shipments by multiple coordinated teams of a large number of individual;

11. The adequacy of planning to protect the public health and safety at an around nuclear facilities, as appropriate, in the event of a terrorist attack against a nuclear facility; and

12. The potential for theft and diversion of nuclear material for such facilities.

A number of these factors are already reflected in the text of the proposed rule. For example, the proposed rule would require protection against suicidal attackers, insiders, and waterborne threats. Some of these factors are not included in the proposed rule. For example, the Commission has carefully considered including an airborne attack in the proposed DBT rule, but has not included a specific attribute of air-based threats, largely for the reasons set forth in Section V below. The Commission invites and looks forward to public comment on the proposed rule provisions, as well as whether or how the 12 factors should be addressed in the DBT rule. The Commission will further consider and resolve any comments received in the final rule.

~~To achieve alignment with requirements imposed by order,~~ The proposed rule would also revise certain exemptions for independent spent fuel storage installations (ISFSIs). The current DBT rule exempts ISFSIs from the land vehicle transport and land vehicle bomb threats contained in §§ 73.1(a)(1)(i)(E) and (a)(1)(iii), respectively. These exemptions should no longer be retained because the Commission issued orders to ISFSIs on October 16, 2002, requiring ISFSIs to protect against these threats. ~~An exemption from the waterborne threat would be added for ISFSIs so that the proposed rule would be consistent with security requirements previously imposed by Commission orders.~~ The Staff evaluated the need for to apply including waterborne requirements to ISFSIs in the October 16, 2002, ISFSI orders and concluded that other means in the orders proposed rule were sufficiently protective that to preclude the need for specific requirements for regarding waterborne threats were not required. Consequently, an exemption from the waterborne threat has been added for ISFSIs in the proposed rule.

The proposed rule would also amend the exemption in the current § 73.1(a) for licensees subject to the provisions of § 73.20. The current rule exempts these licensees from the requirements to protect against vehicles transporting adversary personnel and equipment and the land vehicle bomb. The Commission's DBT orders now, has determined, however, require that due to the current threat environment certain licensees subject to § 73.20 (Category I fuel cycle facilities) need to protect against such threats, so the exemption must be amended accordingly. The amended exemption would continue for other licensees described in 10 CFR § 73.20 (e.g., fuel reprocessing plants licensed under Part 50) because

~~the Commission has not issued any orders that would require the exemption to be eliminated.<sup>1</sup>~~

The approach proposed in this rulemaking maintains a level of detail in the § 73.1(a) rule language that is generally comparable to the current regulation, while updating the general DBT attributes in a manner consistent with the **insights gained from the application of supplemental security** requirements imposed by the April 29, 2003, DBT orders. The result is a proposed rule with a level of detail that reflects all major features of the DBTs, yet avoids compromising licensee security by not publishing the specific tactical and operational capabilities of the DBT adversaries. The goal of this approach is to provide sufficient public notice of the upgrades to the DBTs, including the new modes of attack that facilities must be prepared to defend against, so that meaningful public input is possible regarding the proposed rule's scope and content.

The NRC recognizes that some stakeholders may expect more detail than is set forth in the current or proposed DBT regulations. However, the more detail that is made publicly available about the specific capabilities of the DBT adversaries, the **greater the chance that potential adversaries could exploit that information** ~~more information that would be available and that could be exploited by adversaries.~~ If ~~potential adversaries can readily identify the specific design bases for licensee security systems in a publicly available DBT regulation, then they could determine the force size and weapons types necessary to overcome these security systems.~~ **Disclosing The disclosure of** such details as the specific weapons, **force size**, ammunition, vehicles, and bomb sizes that licensees must be prepared to defend against could substantially assist an adversary in planning an attack.

---

<sup>1</sup>~~Elimination of the exemption from the DBTs for fuel reprocessing plants should be considered if, in the near future, it appears a license application for such a facility will be filed. Fuel reprocessing plants would possess types and quantities of material requiring robust security. Elimination of the exemption is not being pursued here because of the limited scope of this rulemaking.~~

On the other hand, it is important for the public to understand and be informed of the types of attacks against which nuclear power plants and Category I fuel cycle facilities are required to defend. The public has a vital stake in the security of these facilities, as well as the right to meaningful comment when NRC proposes to amend its regulations. Understanding the general scope of the proposed DBT rule is necessary if the public is to exercise its right to meaningful comment and oversight of NRC regulations.

After carefully balancing these competing interests, the NRC arrived at the level of detail regarding the attributes of the DBT presented in the proposed rule. More specific details (e.g., specific weapons, ammunition, etc.,) are consolidated in ACDs, which contain classified or safeguards information. The technical bases for the ACDs are derived largely from intelligence information, and also contain classified and safeguards information that cannot be publicly disclosed. These documents will must be withheld from public disclosure and made available only on a need-to-know basis to those who otherwise qualify for access.

The ACDs may be updated from time to time as a result of the NRC's periodic threat reviews, which NRC has been conducting since 1979. Those threat assessments are performed in conjunction with the intelligence and law enforcement communities to identify changes in the threat environment which may in turn require adjustment of NRC security requirements. Future revisions to the ACDs would not require changes to the DBT regulations in § 73.1, provided the changes remain within the scope of the rule text.

The NRC consulted with Federal, State, and local agencies, and with industry stakeholders in developing the updated DBTs. This consultation involved analysis of intelligence information regarding the trends and capabilities of potential adversaries, and discussion with Federal, law enforcement, and intelligence community agencies. Public comments and suggestions received in response to PRM-73-12; also informed the NRC's

development of this proposed rule. The resolution of PRM-73-12, which is being granted in part and denied in part through this rulemaking, is more fully discussed in Section V of this notice.

The Commission concludes that the proposed amendments to § 73.1 will continue to ensure adequate protection of public health and safety and the common defense and security by requiring the secure use and management of radioactive materials. The revised DBTs represent the largest threats against which private sector facilities must be able to defend with high assurance. The proposed amendments to § 73.1 would not expand the DBTs beyond reflects requirements currently in place under existing NRC regulations and orders.

#### IV. Section by Section Analysis

The following table provides a comparison between the proposed rule text and the current rule text. ~~The changes are based on Commission order EA-03-086 All Power Reactor Licensees; Order Modifying License (Effective Immediately) dated April 29, 2003; Commission order EA-03-087 In the Matter of Nuclear Fuel Services, Inc., Erwin, TN; Order Modifying License (Effective Immediately), dated April 29, 2003; In the Matter of BWX Technologies, Inc., Lynchburg, VA; Order Modifying License (Effective Immediately), dated April 29, 2003.~~

| Old | New | Change |
|-----|-----|--------|
|-----|-----|--------|

|      |   |   |
|------|---|---|
| none | (2)(iv) A waterborne vehicle bomb assault, which may be coordinated with an external assault. | The proposed paragraph would add a new mode of attack not previously part of the DBT, that being a waterborne vehicle bomb assault. This coordinated attack concept is another upgrade to the current regulation. |
|------|---|---|

Additional guidance concerning the adversary characteristics is located in the corresponding draft regulatory guides (radiological sabotage in DG-5017 and theft and diversion in DG-5018). These draft RGs contain either safeguards or classified information and are not publicly available. ~~The DBT requirements in proposed § 73.1 and the adversary characteristic documents are consistent with the April 29, 2003, DBT orders and as a result would not impose any additional DBT requirements. As such, current licensees would not be required to revise their security plans in response to the proposed § 73.1 requirements, nor would any additional reporting requirements be imposed.~~

#### V. Petition for Rulemaking (PRM-73-12)

As discussed above in this notice, the NRC staff reviewed PRM-73-12 to determine whether the regulations in Part 73 regarding the DBT should be amended in response to requests in PRM-73-12 and public comments received on the petition. PRM-73-12 was filed by the Committee to Bridge the Gap on July 23, 2004. The petition requests that the NRC amend its regulations to revise the DBT regulations (in terms of the numbers, teams, capabilities, planning, willingness to die and other characteristics of adversaries) to a level



The table contains the NRC's responses to the issues raised by public comments, but the responses to comments do not include a detailed comparison of the differences between the current DBT requirements (as imposed by the April 29, 2003 orders) and the requests in PRM-73-12. Such a comparison could ~~reveal the limits of the proposed DBT rule, thereby~~ compromising security. The NRC's post-September 11, 2001, review of security requirements encompassed all the issues raised by the petitioner, and a number of the petitioner's requested changes to the DBT have been incorporated into the proposed DBT amendments as discussed below.

The NRC is partially granting PRM-73-12 by conducting this proposed rulemaking to revise the DBT requirements in § 73.1(a). Some of the requested changes in PRM-73-12 are reflected in the proposed rule text. These changes include the proposed requirements in §§ 73.1(a)(1)(i) and (a)(2)(i) that licensees be required to protect against one or more teams of adversaries operating from multiple entry points. PRM-73-12 also requested that the DBT regulation make clear that adversaries are willing to kill and be killed. This change is reflected in proposed §§ 73.1(a)(1)(i)(A) and (a)(2)(i)(A). The proposed rule would also require licensees to protect against waterborne threats, a wider range of land vehicles, and coordinated attacks. All of these features of the proposed rule grant requests made in PRM-73-12.

The NRC intends to ~~deny~~ **defer action on** the other requests in PRM-73-12, specifically the **ose** aspects of PRM 73-12 which deal with the defense of nuclear power plants against aircraft, **and to address those issues as part of the final action on this proposed rule.** ~~PRM-73-12 requests that NRC require licensees to defend against air attack by constructing a series of steel beams that would break apart an attacking plane before it could impact the facility. The structure is referred to as "beamhenge."~~

Federal ~~and other governmental~~ efforts to protect the nation from terrorist attacks by air have increased substantially since September 11, 2001. Those efforts already include a variety of measures such as enhanced airline passenger and baggage screening, strengthened cockpit doors, and the federal Air Marshals program. Federal law enforcement and intelligence agencies have increased efforts to identify potential aircraft-related threats before they can be carried out. The Department of Defense and the Federal Aviation Administration have acted to protect airspace above a nuclear power plant in response to a threat at the time thought to be credible, but which was later determined to be non-credible. These and other governmental-wide efforts have improved protection against air attacks on all industrial facilities, both nuclear and non-nuclear.

Following the September 11, 2001; attacks in New York, the Pentagon, and Pennsylvania, the NRC conducted assessments of the potential for and consequences of terrorists targeting a nuclear power plant for aircraft attack, the physical effects of such a strike, and compounding factors such as meteorology that would affect the impact of potential radioactive releases. ~~As a result of these preliminary assessments~~ Furthermore, the NRC required nuclear power plant licensees to implement enhancements to mitigate potential consequences in the unlikely event of an ~~successful~~ attack, including aircraft, on a nuclear power plant. ~~As part of a comprehensive review of security for NRC-licensed facilities, the NRC conducted detailed site-specific engineering studies of a limited number of representative nuclear power plants to assess potential vulnerabilities of deliberate attacks involving large commercial aircraft. In conducting these studies, the NRC drew on national experts from several Department of Energy laboratories, using state-of-the-art structural and fire analyses. For the facilities analyzed, the vulnerability studies confirm that the likelihood of a large, commercial aircraft both damaging the reactor core and releasing radioactivity that~~

~~could affect public health and safety is low. Even in the unlikely event of a radiological release due to terrorist use of a large aircraft, there would be sufficient time to implement mitigating actions and offsite emergency plans such that the NRC's emergency planning basis remains valid. Furthermore, the NRC staff will continue to review intelligence and threat reporting to recommend any appropriate modifications to the DBT or NRC requirements to mitigate air attacks. Therefore, based on the review of the petition and the considerations noted above, the NRC intends to deny this portion of PRM-73-12.~~

PRM-73-12 also requests that nuclear power plants be required to defend against more than the number of attackers that carried out the September 11, 2001 attacks, and identifies specific weapons that nuclear power plants should be able to defend against. The Commission cannot comment publicly on the precise numbers of attackers or types of weapons that nuclear power plants are required to defend against under the proposed DBTs and ACDs for reasons stated earlier in this notice. However, the Commission has conducted a thorough review of security to continue to ensure that nuclear power plants and other licensed facilities have effective **defensive capabilities and** security measures in place given the changing threat environment. An important part of this review was the consideration of a terrorist attack similar to that which occurred on September 11, 2001. However, the DBT is based upon review and analysis of actual **demonstrated** adversary characteristics **demonstrated** in a range of terrorist attacks, **worldwide** and a determination as to **which the** attacks **against which** a private security force could reasonably be expected to defend **against**.

In summary, the NRC grants PRM-73-12 in part by conducting this proposed rulemaking to revise the DBT requirements in § 73.1(a) to reflect certain specific requested changes contained in PRM-73-12 in the proposed rule text, **and is deferring action on other**

requests in PRM-73-12, specifically those aspects of PRM-73-12 which deal with air-based attacks. ~~The NRC intends to deny the remainder of the petition.~~

## VI. Guidance

The NRC staff is preparing new regulatory guides, as listed below, to provide detailed guidance on the revised DBT requirements in proposed § 73.1. These guides are intended to assist ~~current licensees in ensuring that their security plans meet the requirements in the proposed rule, as well as~~ future license applicants in the development of their security programs and plans. The ~~new~~ guidance ~~incorporates the insights gained from applying the earlier~~ consolidates other guidance that was used to develop, review, and approve the site security plans that licensees put in place in response to the April 2003 orders. As such, this regulatory guidance ~~would not~~ ~~is expected to be consistent with revised security measures at~~ ~~cause~~ current licensees' ~~to revise security measures at their facilities.~~ The publication of the regulatory guides is planned to coincide with the publication of the final rule. The guides are described below.

1. Draft Regulatory Guide (DG-5017) , "Guidance for the Implementation of the Radiological Sabotage Design-Basis Threat (Safeguards)." This regulatory guide will provide guidance to the industry on the radiological sabotage DBT. DG-5017 contains safeguards information, and therefore, is being withheld from public disclosure and distributed on a need-to-know basis to those ~~with~~ who otherwise qualify for access.

2. Draft Regulatory Guide (DG-5018), "Guidance for the Implementation of the Theft and Diversion Design-Basis Threat (Classified)." This regulatory guide will provide guidance to the industry on the theft or diversion DBT. DG-5018 contains classified information and

therefore, is withheld from public disclosure and distributed only on a need to know basis to those who otherwise qualify for access.

#### VII. Criminal Penalties

For the purposes of Section 223 of the Atomic Energy Act, as amended, the Commission is issuing the proposed rule to revise § 73.1 under one or more sections of 161 of the Atomic Energy Act of 1954 (AEA). Criminal penalties, as they apply to regulations in Part 73 are discussed in § 73.81.

#### VIII. Compatibility of Agreement State Regulations

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 AEA or the provisions of Title 10 of the Code of Federal Regulations, and although an Agreement State may not adopt program elements reserved to 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, but does not confer regulatory authority on the State.

own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the size standards established by the NRC (10 CFR 2.810).

#### XVI. Backfit analysis

~~The NRC has determined that the backfit rule does not apply to this proposed rule. A backfit analysis is not required for this proposed rule because these amendments do not impose more stringent requirements on licensees. Current DBT requirements were imposed by orders dated April 29, 2003, and implemented through the revised and NRC-approved security plans for each licensee. The proposed DBT requirements for § 73.1 are the same as those imposed by the DBT orders.~~ The NRC determined, pursuant to the exception in 10 CFR 50.109 (a)(4)(iii), that a backfit analysis is unnecessary for this proposed rule. Section 50.109 states in pertinent part that a backfit analysis is not required if the Commission finds and declares that a "regulatory action involves defining or redefining what level of protection to the public health and safety or common defense and security should be regarded as adequate." The proposed rule would increase the security requirements currently prescribed in NRC regulations, and is necessary to protect nuclear facilities against potential terrorists. When the Commission imposed security enhancements by order in April 2003, it did so in response to an escalated domestic threat level. Since that time, the Commission has continued to monitor intelligence reports regarding plausible threats from terrorists currently facing the U.S. The Commission has also gained experience from implementing the order requirements and reviewing revised licensee security plans. The Commission has considered all of this information and finds that the security requirements previously imposed by DBT orders, which applied only to existing licensees, should be made generically applicable. The Commission further finds that the proposed rule would redefine the security

requirements stated in existing NRC regulations, and is necessary to ensure that the public health and safety and common defense and security are adequately protected in the current, post-9/11 environment.

#### List of Subjects in 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 Part 73.

---

---

**Regulatory Analysis of Proposed Rule, 10 CFR Part  
73.1- Design Basis Threat**

---

---

**U.S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation**

**June 2005**





## Executive Summary

The design basis threat (DBT) requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. The Nuclear Regulatory Commission (NRC) requirements include protection against radiological sabotage (applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed strategic special nuclear material (SSNM) (applied to Category I fuel cycle facilities). The DBTs are used by these licensees to form the basis for site-specific defensive strategies.

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders resulted in licensee security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening. Currently, all power reactor and Category I fuel facilities have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.

This draft regulatory analysis considers two alternatives **to the proposed rule changes** to for ~~consolidating the supplemental requirements put in place by the orders with the DBT~~ requirements in § 73.1(a). The proposed rulemaking also considers the petition for rulemaking (PRM) filed by the Committee to Bridge the Gap (PRM-73-12).

The first alternative is to take no additional regulatory action ("The No Action Alternative") beyond the DBT orders. Under this alternative, NRC would not revise the governing regulations in § 73.1 pertaining to DBT, but would continue the status quo, which is implementation of supplemented DBT requirements imposed through the DBT orders.

The second alternative, which was selected, is to revise the § 73.1 DBT requirements through rulemaking. Because the DBT involves the discussion of information that is either safeguards information or classified, three rulemaking strategies were evaluated for the most appropriate approach.

The strategy chosen is similar to the rulemaking practice the NRC used when the DBT requirements were last revised. Compared to the other strategies, this rulemaking approach would provide the public with the opportunity for meaningful comment and participation in the process. However, the public's participation and access to classified and safeguards information is limited to those who have a need-to-know and who otherwise qualify for access. The NRC selected this rulemaking strategy after carefully considering the balance between openness and the protection of sensitive **and classified** information, as well as the need for complying with the notice-and-comment requirements of the Administrative Procedure Act. The details in the proposed rule would likely be assumed by potential adversaries but would not offer information that would assist adversaries in planning or carrying out an attack. At the same time, the proposed rule would include sufficient detail to enable comments from external stakeholders on NRC regulatory activities. By placing this information in the rule, the NRC concluded that the benefits gained by maintaining more openness in the NRC rulemaking process for § 73.1 exceeded the risks of releasing the information.

## I. Statement of Problem and NRC Objectives

### (a) History and Background

The DBT requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. The Nuclear Regulatory Commission (NRC) requirements include protection against radiological sabotage (generally applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed SSNM (generally applied to Category I fuel cycle facilities). Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM. The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans.

Following the terrorist attacks on September 11, 2001, the NRC conducted a thorough review of security to ensure that nuclear power plants and other licensed facilities continued to have effective security measures in place for the changing threat environment. In so doing, the NRC recognized that some elements of the DBTs required enhancement due to the escalation of the domestic threat level. After soliciting and receiving comments from Federal, State, local agencies, and industry stakeholders, the NRC imposed by order supplemental DBT requirements which contained additional detailed adversary characteristics. The balance between licensee responsibilities and the responsibilities of the local, State and Federal Governments was considered during the development of the April 29, 2003, DBT orders.

The Commission's decision was based on the analysis of intelligence information regarding the trends and capabilities of the potential adversaries and discussions with Federal, law enforcement, and intelligence community agencies. These enhanced adversary characteristics are reflective of the new threat environment and are described in the April 29, 2003, DBT orders. In general terms, DBTs are comprised of attributes selected from the overall threat environment. The ACDs set forth the specific details of the attributes of the DBTs. The DBT technical basis document contains a basis for the specific adversary characteristics. These supplemental documents contain safeguards and classified information, and therefore, are withheld from public disclosure and only distributed on a need-to-know basis to persons with authorized access. The NRC's DBT is ~~not based on worst-case scenarios~~ but rather on actual adversary characteristics demonstrated worldwide and a determination as to those characteristics against which a private security force could reasonably be expected to provide protection.

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders resulted in licensee security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening. Currently, all power

reactor and Category I fuel facilities have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.

(b) Objective of Proposed Rulemaking

~~The proposed rulemaking would consolidate the supplemental requirements put in place by the orders and the existing DBT requirements in § 73.1(a).~~ The proposed rulemaking would make generically applicable the security requirements previously imposed on existing licensees by the Commission's April 2003 DBT orders, and redefine in NRC regulations the level of security necessary to ensure adequate protection of the public health and safety and common defense and security. The proposed rule would describe the DBTs at a level of detail comparable to the current rule. Specific details related to the threat, which include both safeguards information and classified information, would be consolidated in adversary characteristics documents that would include requirements consistent with those in the DBT orders. The adversary characteristics documents would be available to those with a need to know and authorized access. The proposed rulemaking would include the DBTs for both radiological sabotage (applied to power reactors and Category 1 fuel cycle facilities) and theft and diversion (Category 1 fuel cycle facilities). The proposed rulemaking would also consider the petition for rulemaking filed by the Committee to Bridge the Gap (PRM-73-12).

(c) Backfit Rule Concerns

This section should be replaced with revised discussion from FRN.

[This proposed regulatory action would not involve the imposition of any new requirements. The approach selected for the proposed rule would not expand the DBTs beyond requirements currently in place under existing NRC regulations and orders. Consequently, the proposed § 73.1(a) amendments would not require existing licensees to make additional changes to their current NRC-approved security plans. As such, there would be no backfits involved with this regulatory action.]

II. Analysis of Alternatives

There are basically two alternatives for addressing changes to the DBT requirements. Those alternatives are to take no additional regulatory action beyond the DBT orders (No Action Alternative) and rulemaking (of which there are three variations). These alternatives are discussed below in more detail.

(a) No Action Alternative

This alternative is simply to take no additional regulatory action and, as a result, not revise the governing regulations in § 73.1(a) pertaining to DBT. This approach would continue the status quo, which is implementation of supplemented DBT requirements as imposed through the DBT orders. While this action would save the agency resources that it would expend revising the regulation, it would leave § 73.1(a) as is, and these requirements do not reflect the supplemented DBT requirements currently in place. As such, the regulations would not be up-to-date; this situation could introduce inefficiencies into the regulatory process. This alternative was not chosen since it is important to consolidate the DBT requirements and revise § 73.1(a) accordingly.

(b) Rulemaking Alternatives

The second alternative is to revise § 73.1(a) DBT requirements. There are several different strategies for revising the requirements in the regulations. The strategies are:

(1) A rulemaking would contain the DBT details (which are safeguards and classified information) but which would withhold this information from public disclosure. This would require a change to Part 2 to develop a new rulemaking process.

(2) A rulemaking that would remove all detail from the regulation and reference documents that contain the DBT details.

(3) A rulemaking that would revise § 73.1(a) requirements to remove detail that might provide useful information to potential adversaries and follow an approach similar to the current regulation by not referencing a document containing DBT attributes, but keeping the level of detail in the rule language consistent with the current detail level in an effort to maximize the opportunity for meaningful stakeholder participation.

The first strategy would require a change in § 2.800 to develop the new rulemaking procedures that would account for the withholding of safeguards and classified information from the public. This approach envisions neither public notice of a rulemaking nor an opportunity for the public to comment on the proposed DBT regulation. This proposed rule could contain detailed DBT requirements (which are safeguards and classified information), but the DBT detail would be withheld from the public. Developing new rulemaking procedures would likely involve considerable resources and there is the potential that this process would not comply with the Administrative Procedure Act (APA). Given these challenges and the additional expenditure of staff resources to pursue this approach, this strategy was not chosen.

The second strategy would remove all DBT details from § 73.1(a) and reference documents containing the DBT requirements. This option would limit availability of information that could aid potential adversaries. However, removing all the DBT details to a document that would be restricted from public access (due to the safeguards and classified content), would create questions regarding whether the approach provides the public with a meaningful opportunity to comment. For this reason, this approach was not selected.

The third strategy would revise the § 73.1(a) requirements to accurately reflect the new DBT requirements except for information that could be useful to potential adversaries, while removing information that is outdated. This strategy would not reference a document within the regulations, and in this sense, this strategy is similar to current regulatory practice (i.e., § 73.1 has been structured this way since its inception). This approach was used when the DBT requirements were last revised to incorporate new vehicle bomb requirements with one important exception. This approach would maintain a level of detail in the rule text that is comparable to the current § 73.1 level of detail in an effort to maximize the opportunity for external stakeholders to participate in the rulemaking. Compared to the other rulemaking strategies described above, this rulemaking strategy would provide the public with the greatest opportunity to comment and participate in the rulemaking process. However, the public's participation and access to safeguards and classified information is restricted to members of the public who have a need to know and authorized access. This is the rulemaking strategy that is judged as being the best option that balances public participation with the need to protect

### (c) Conclusion Regarding Alternative Strategies

Based on the reasons discussed above, the NRC concludes that a rulemaking approach described in the third strategy is the best approach.

### III. Estimate and Evaluation of Values and Impacts

#### (a) Overview

This section should be revised consistent with the FRN.

[This rulemaking would revise the governing regulations pertaining to the DBTs to more closely align the regulation with the actual requirements that were implemented by the April 29, 2003 DBT orders. This rulemaking would not impose any new requirements beyond those which have already been imposed through orders. A Petition for Rulemaking (PRM-73-12) is being considered as part of this rulemaking with the intention of determining whether DBT requirements need to be strengthened as the petitioner requests. The NRC is granting PRM-73-12 in part, and denying PRM in part (refer to Section V of the proposed rule notice). As a result of the DBT orders, licensees revised their security plans and submitted them for staff review and approval. The staff reviews were completed on October 29, 2004. Furthermore, this rulemaking would not impose any new information collection requirements.

This rulemaking would have no impact on plant risk. This rulemaking would not change the risk associated with security-related events from the current level because requirements that are currently in place per the orders, remain in place. Because there would be no net change in risk related to radiological sabotage or theft and diversion (the implemented orders have already addressed this), there would be no net change in potential value (in terms of reduced risk) due to this rulemaking.

There is value in pursuing this rulemaking, because revising § 73.1(a) requirements to more accurately reflect the implemented DBT requirements (with the constraint that certain information would not be revealed within § 73.1(a)), would further increase the regulatory coherency by updating the DBT requirements in § 73.1(a).]

#### (b) Impacts on Licensees

Impacts upon the licensees from this proposed rulemaking would be minimal. Because the adversary characteristics would remain consistent with those promulgated by orders, no technical changes will be required. Licensees may need to update references in their security plan documentation, which could be accomplished without NRC review and in conjunction with future plan updates.

#### (c) Impacts to the NRC

- a. The primary impact on the NRC would be the resources expended in conducting this rulemaking, including the consolidation of security guidance related to the DBT. This guidance was developed during the post September 11, 2001, time frame, and was used by licensees to revise security plans per the new DBT.

---

---

**Environmental Assessment Supporting Proposed  
Rule, 10 CFR Part 73.1- Design Basis Threat**

---

---

**U.S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation**

**June 2005**



UNITED STATES NUCLEAR REGULATORY COMMISSION  
ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is proposing to revise the requirements in 10 CFR 73.1. Specifically, the proposed rule would revise the design basis threat (DBT) requirements for both radiological sabotage, which are generally applied to power reactors and Category I fuel cycle facilities, and theft or diversion of NRC-licensed Strategic Special Nuclear Material (SSNM), which are generally applied to Category I fuel cycle facilities. Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM. The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans. The rulemaking also considered a petition for rulemaking filed by the Committee to Bridge the Gap on July 23, 2004, (PRM-73-12) that pertains to the DBT.

ENVIRONMENTAL ASSESSMENT

Identification of the Action:

~~The principal objective of the proposed revision to the § 73.1(a) DBT rule is to consolidate the supplemental requirements put in place by the April 29, 2003, DBT orders with the existing DBTs requirements in § 73.1(a).~~ The principal objective of the proposed rule is to make generically applicable the security requirements previously imposed by the Commission's

April 29, 2003 DBT orders, and to define in NRC regulations the level of security necessary to ensure adequate protection of the public health and safety and common defense and security.

The approach proposed in this rulemaking would maintain a level of specificity in § 73.1(a) rule language that is comparable to the current regulation, while revising DBT attributes to be consistent with the requirements imposed by the April 29, 2003, DBT orders. The revised approach would keep certain specific additional details, which are both safeguards and classified information, in separate, non-publicly-available adversary characteristics documents.

A Petition for Rulemaking, PRM-73-12, filed by the Committee to Bridge the Gap, was considered as part of this proposed rulemaking, would be dispositioned as described in the notice of proposed rulemaking. The petition requests that the NRC amend its regulations to upgrade the DBT regulations (in terms of numbers, teams, capabilities, planning, willingness to die and other characteristics of adversaries) to a level that encompasses, with a sufficient margin of safety, the terrorist capabilities demonstrated during the attacks of September 11, 2001. The petition also requests that security plans, systems, inspections, and force-on-force exercises be revised in accordance with the amended DBT. Finally, the petition requests that a provision be added to Part 73 to require licensees to construct shields against air attack (referred to as "beamhenge"), so that nuclear power plants would be able to withstand an air attack from a jumbo jet similar to the September 11, 2001 attacks. PRM-73-12 was published for public comment in the *Federal Register* on November 8, 2004 (69 FR 64690). The public comment period expired on January 24, 2005. There were 845 comments submitted on PRM-73-12, of which 528 were from letters. Many of the comments were submitted after the comment period expired, however the staff reviewed and considered all of the comments. Comments were received from nine state attorney generals, approximately 20 public interest groups, a U.S. Congressman from Massachusetts, and six industry groups and licensees. In



NOTATION VOTE  
RESPONSE SHEET


TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MCGAFFIGAN  
SUBJECT: **SECY-05-0106 - PROPOSED RULEMAKING TO  
REVISE 10 CFR 73.1, DESIGN BASIS THREAT  
(DBT) REQUIREMENTS**

Approved  <sup>w/comments</sup> Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS:

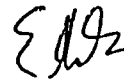
See attached comments.

  
\_\_\_\_\_  
SIGNATURE  
October 14, 2005  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

**Commissioner McGaffigan's Comments on SECY-05-0106**  
**(Reinstated Vote Dated 10/14/05)**

In order to facilitate prompt Commission action on this paper (for which there is a statutory mandate in the Energy Policy Act of 2005), I hereby reinstate my June 30, 2005 vote (copy attached) during my previous term on the Commission. I recognize that some adjustment to the Statement of Considerations will be required in light of the Energy Policy Act, and will address that in the staff requirements memorandum process. I am disappointed to learn that the far more important 10 CFR 73.55 (and Appendices) proposed rule package has now been delayed three months until late May 2006, although I recognize that that package is the best vehicle for incorporating some of the Energy Policy Act changes. Potential combined construction authorization and operating license (COL) applicants need to know the security rules under which they will be filing their applications as soon as possible.



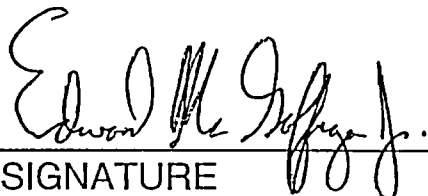
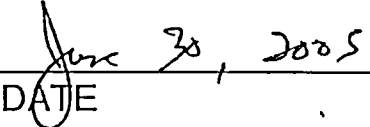
NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MCGAFFIGAN  
SUBJECT: **SECY-05-0106 - PROPOSED RULEMAKING TO  
REVISE 10 CFR 73.1, DESIGN BASIS THREAT  
(DBT) REQUIREMENTS**

w/comments and edits  
Approved  Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_  
Not Participating \_\_\_\_\_

COMMENTS:  
See attached comments and edits.

  
\_\_\_\_\_  
SIGNATURE  
  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

Comments of Commissioner McGaffigan on SECY-05-0106

I approve the proposed rule and response to the Petition for Rulemaking subject to extensive edits contained in the attached pages. While I have no problem with the substance of the requirements being proposed to be added to the regulations through this rulemaking, there needs to be a recognition within the package that the basis for the changes is not a simple codification of the security orders issued following the terrorist attacks of September 11, 2001. We are currently engaged in litigation over whether those very orders amounted to improper rulemaking and it should be recognized that this rulemaking is informed by our interactions with licensees during implementation of the security orders, including staff's review of detailed security plans submitted by licensees in response to those orders. I think it would be unrealistic to say that our experiences over the last several years of implementation of the orders and review of the security plan revisions did not factor into this rulemaking. Further, where it is not necessary to refer to the orders to generally describe our rationale, we should not refer to the orders such that we create frustration for the reader by continually referencing documents they cannot review in all their detail. For the Federal Register Notice I have made changes that will be consistent with the rulemaking being based on our experience with the orders rather than a mere codification of the orders.

While I have not gone through and made similar changes to the other attachments (Executive Summary, Finding of No Significant Impact, and letter to Petitioner on the PRM), similar changes should be made to assure we are not creating the impression in any of our documents that we are merely incorporating the security orders into our regulations without having used our several years of experience in developing this proposal.

I would also note that this is the first of two (and perhaps more) proposed rules on power reactor security. The next rule amending 10 CFR §§73.53; 73.56 and 73.57, and various Part 73 appendices, is due to the Commission in March 2006 (a very ambitious schedule). Both of these rule amendments are critical to establishing a stable basis for future applicants for advanced reactor combined operating licenses (COLs).

EMG

NUCLEAR REGULATORY COMMISSION

10 CFR Part 73

RIN 3150-AH60

Design Basis Threat

AGENCY: Nuclear Regulatory Commission

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations that govern the requirements pertaining to design basis threat (DBT). The proposed amendment would consolidate the existing DBT requirements in § 73.1(a) with the supplemental DBT requirements ~~developed after consideration of the experience with implementation of the~~ ~~put in place~~ by Commission orders issued on April 29, 2003 (68 FR 24517, 68 FR 26675, 68 FR 26676). The specific details related to the threat, which contain both safeguards information (SGI) and classified information, are ~~consolidated~~ ~~contained~~ in adversary characteristics documents (ACDs) that are not publicly available. These documents include specific details of the attributes of the threat consistent with the requirements imposed in the April 29, 2003, DBT orders. The proposed rule would revise the DBT requirements for radiological sabotage (applied to power reactors and Category I fuel cycle facilities pursuant to § 73.55(a) and § 73.20(a) respectively), and theft or diversion of NRC-licensed Strategic Special Nuclear Material (SSNM) (applied to Category I fuel cycle facilities pursuant to § 73.20(a)). The NRC has developed draft Regulatory Guides (RGs) that provide guidance concerning the DBT for radiological sabotage and theft and diversion. These draft RGs have limited distribution because they contain either safeguards or classified information. Additionally, a Petition for Rulemaking (PRM -73-12), filed by the Committee to Bridge the Gap, was considered as part of this proposed rulemaking; the NRC's disposition of this petition is contained in this document.

## I. Background

The DBT requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. The NRC requirements include protection against radiological sabotage (generally applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed SSNM (generally applied to Category I fuel cycle facilities). Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM. The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans.

Following the terrorist attacks on September 11, 2001, the NRC conducted a thorough review of security to ensure that nuclear power plants and other licensed facilities continued to have effective security measures in place for the changing threat environment. In so doing, the NRC recognized that some elements of the DBTs required ~~early~~ enhancement due to the escalation of the domestic threat level. After soliciting and receiving comments from Federal, State, local agencies, and industry stakeholders, the NRC imposed by order supplemental DBT requirements which contained additional detailed adversary characteristics. The balance between licensee responsibilities and the responsibilities of the local, State and Federal Governments was considered during the development of the April 29, 2003, DBT orders. ~~With several years experience under these orders the Commission is ready to add those attributes to the regulations which experience shows should be generically required of certain licensees as described herein.~~

The Commission's decision was based on the analysis of intelligence information regarding the trends and capabilities of the potential adversaries and discussions with Federal, law enforcement, and intelligence community agencies. These enhanced adversary

characteristics are reflective of the new threat environment and are described in the April 29, 2003, DBT orders. In general terms, DBTs are comprised of attributes selected from the overall threat environment. The ACDs set forth the specific details of the attributes of the DBTs. The DBT technical basis document contains a basis for the specific adversary characteristics. These supplemental documents contain safeguards and classified information, and therefore, are withheld from public disclosure and only distributed on a need-to-know basis to persons with authorized access. The NRC's DBT is not based on worst-case scenarios but rather on actual adversary characteristics demonstrated worldwide and a determination as to those characteristics against which a private security force could reasonably be expected to provide protection.

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders resulted in licensee security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening. ~~The NRC has reviewed and approved revised security plans for~~ Currently, all power reactor and Category I fuel facilities ~~that licensees developed~~ have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.

## II. Rulemaking Initiation

On July 19, 2004, the staff issued a memorandum entitled "Status of Security-Related Rulemaking" to inform the Commission of plans to close two longstanding security-related actions and replace them with a comprehensive rulemaking plan to modify physical protection requirements for power reactors. This memorandum described rulemaking efforts that were preempted by the terrorist activities of September 11, 2001, and summarized the security-related actions taken following the attack. In response to this memorandum, the Commission directed the staff in an August 23, 2004, Staff Requirements Memorandum (SRM), to forego the development of a rulemaking plan and provide a schedule for the completion of 10 CFR 73.1, 73.55, and Part 73 Appendix B rulemakings. The requested schedule was provided to the Commission by memorandum dated November 16, 2004.

## III. Proposed Regulations

The principal objective of the proposed revision to the § 73.1(a) DBT rule is to consolidate the ~~attributes of~~ supplemental requirements put in place by the April 29, 2003, DBT orders, ~~which experience has shown should generically apply to certain classes of licensees~~ with the existing DBTs requirements in § 73.1(a) in an expedited manner. ~~During the development of this rule the staff identified several potential changes to the regulations that are not proposed at this time and which the staff does not consider necessary at this time to assure safety or security.~~

~~To achieve alignment with requirements imposed by order, the~~ ~~The~~ proposed rule would revise certain exemptions for independent spent fuel storage installations (ISFSIs). The current DBT rule exempts ISFSIs from the land vehicle transport and land vehicle bomb threats contained in §§ 73.1(a)(1)(i)(E) and (a)(1)(iii), respectively. These exemptions should no longer be retained because the Commission issued orders to ISFSIs on October 16, 2002, requiring



ISFSIs to protect against these threats. An exemption from the waterborne threat would be added for ISFSIs so that the proposed rule would be consistent with security requirements previously imposed by Commission orders. The Staff evaluated the need for including waterborne requirements in the October 16, 2002, ISFSI orders and concluded that other means in the orders were sufficiently protective that specific requirements for waterborne were not required.

The proposed rule would also amend the exemption in the current § 73.1(a) for licensees subject to the provisions of § 73.20. The current rule exempts these licensees from the requirements to protect against vehicles transporting adversary personnel and equipment and the land vehicle bomb. The Commission's ~~has determined~~ DBT orders now, however, require ~~that~~ certain licensees subject to § 73.20 (Category I fuel cycle facilities) ~~need~~ to protect against such threats, so the exemption must be amended accordingly. The amended exemption would continue for other licensees described in 10 CFR § 73.20 (e.g., fuel reprocessing plants licensed under Part 50) ~~because the Commission has not issued any orders that would require the exemption to be eliminated.~~<sup>1</sup>

The approach proposed in this rulemaking maintains a level of detail in the § 73.1(a) rule language that is generally comparable to the current regulation, while updating the general DBT attributes in a manner consistent with the ~~experience gained in application of~~ supplemental requirements imposed by the April 29, 2003, DBT orders. The result is a proposed rule with a level of detail that reflects all major features of the DBTs, yet avoids compromising licensee security by not publishing the specific tactical and operational capabilities of the DBT adversaries. The goal of this approach is to provide sufficient public

---

<sup>1</sup>Elimination of the exemption from the DBTs for fuel reprocessing plants should be considered if, in the near future, it appears a license application for such a facility will be filed. Fuel reprocessing plants would possess types and quantities of material requiring robust security. Elimination of the exemption is not being pursued here because of the limited scope of this rulemaking.

cannot be publicly disclosed. These documents will be withheld from public disclosure and made available on a need-to-know basis to those who otherwise qualify for access.

The ACDs may be updated from time to time as a result of the NRC's periodic threat reviews, which NRC has been conducting since 1979. Those threat assessments are performed in conjunction with the intelligence and law enforcement communities to identify changes in the threat environment which may in turn require adjustment of NRC security requirements. Future revisions to the ACDs would not require changes to the DBT regulations in § 73.1, provided the changes remain within the scope of the rule text.

The NRC consulted with Federal, State, and local agencies, and with industry stakeholders in developing the updated DBTs. This consultation involved analysis of intelligence information regarding the trends and capabilities of potential adversaries, and discussion with Federal, law enforcement, and intelligence community agencies. Public comments and suggestions received in response to PRM-73-12, also informed the NRC's development of this proposed rule. The resolution of PRM-73-12, which is being granted in part and denied in part, is more fully discussed in Section V of this notice.

The Commission concludes that the proposed amendments to § 73.1 ensure adequate protection of public health and safety and the common defense and security by requiring the secure use and management of radioactive materials. The DBTs represent the largest threats against which private sector facilities must be able to defend with high assurance. The proposed amendments to § 73.1 would not expand the DBTs beyond requirements currently in place under existing NRC regulations and orders.

#### IV. Section by Section Analysis

The following table provides a comparison between the proposed rule text and the current rule text. ~~The changes are based on Commission order EA-03-086 All Power Reactor~~

~~Licensees; Order Modifying License (Effective Immediately) dated April 29, 2003; Commission order EA-03-087 In the Matter of Nuclear Fuel Services, Inc., Erwin, TN; Order Modifying License (Effective Immediately), dated April 29, 2003; In the Matter of BWX Technologies, Inc., Lynchburg, VA; Order Modifying License (Effective Immediately), dated April 29, 2003.~~

| Old  | New   | Change  |
|--|---|---|
| <p>(a) Purpose. This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used. The following design basis threats, where referenced in ensuing sections of this part, shall be used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft of special nuclear material. Licensees subject to the provisions of § 72.182, § 72.212, § 73.20, § 73.50, and § 73.60 are exempt from § 73.1(a)(1)(i)(E) and § 73.1(a)(1)(iii).</p> | <p>(a) Purpose. This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used. The following design basis threats, where referenced in ensuing sections of this part, shall be used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft or diversion of special nuclear material. Licensees subject to the provisions of § 73.20 (except for fuel cycle licensees authorized under part 70 of this chapter to receive, acquire, possess, transfer, use, or deliver for transportation formula quantities of strategic special nuclear material ), § 73.50, and § 73.60 are exempt from § 73.1(a)(1)(i)(E), § 73.1(a)(1)(iii), § 73.1(a)(1)(iv), § 73.1(a)(2)(iii) and § 73.1(a)(2)(iv). Licensees subject to the provisions of § 72.212, are exempt from § 73.1(a)(1)(iv).</p> | <p>The proposed paragraph is modified to clarify that the DBTs are designed to protect against diversion in addition to theft of special nuclear material.</p> <p>The proposed exemptions would be updated based on the order requirements and conforming changes to other paragraphs of this part.</p> |

unlikely event of a successful attack on a nuclear power plant. As part of a comprehensive review of security for NRC-licensed facilities, the NRC conducted detailed site-specific engineering studies of a limited number of nuclear power plants to assess potential vulnerabilities of deliberate attacks involving large commercial aircraft. In conducting these studies, the NRC drew on national experts from several Department of Energy laboratories using state-of-the-art structural and fire analyses. For the facilities analyzed, the vulnerability studies confirm that the likelihood of ~~an aircraft~~ both damaging the reactor core and releasing radioactivity that could affect public health and safety is low. Even in the unlikely event of a radiological release due to terrorist use of a large aircraft, there would be sufficient time to implement mitigating actions and offsite emergency plans such that the NRC's emergency planning basis remains valid. Furthermore, the NRC staff will continue to review intelligence and threat reporting to recommend any appropriate modifications to the DBT or NRC requirements to mitigate air attacks. Therefore, based on the review of the petition and the considerations noted above, the NRC intends to deny this portion of PRM-73-12.

PRM-73-12 also requests that nuclear power plants be required to defend against more than the number of attackers that carried out the September 11, 2001 attacks, and identifies specific weapons that nuclear power plants should be able to defend against. The Commission cannot comment publicly on the precise numbers of attackers or types of weapons that nuclear power plants are required to defend against under the proposed DBTs and ACDs for reasons stated earlier in this notice. However, the Commission has conducted a thorough review of security to continue to ensure that nuclear power plants and other licensed facilities have effective security measures in place given the changing threat environment. An important part of this review was the consideration of a terrorist attack similar to that which occurred on September 11, 2001. However, the DBT is based upon

review and analysis of actual adversary characteristics demonstrated in a range of terrorist attacks worldwide and a determination as to which attacks a private security force could reasonably be expected to defend against.

In summary, the NRC grants PRM-73-12 in part by conducting this proposed rulemaking to revise the DBT requirements in § 73.1(a) to reflect certain specific requested changes contained in PRM-73-12 in the proposed rule text. The NRC intends to deny the remainder of the petition.

## VI. Guidance

The NRC staff is preparing new regulatory guides, as listed below, to provide detailed guidance on the revised DBT requirements in proposed § 73.1. These guides are intended to assist future license applicants in the development of their security programs and plans. The guidance consolidates ~~will be based on experience gained in applying~~ other guidance that was used to develop, review, and approve the site security plans that licensees put in place in response to the April 2003 orders. As such, ~~it is not expected that~~ this regulatory guidance would not cause current licensees to revise security measures at their facilities. The publication of the regulatory guides is planned to coincide with the publication of the final rule. The guides are described below.

1. Draft Regulatory Guide (DG-5017) , "Guidance for the Implementation of the Radiological Sabotage Design-Basis Threat (Safeguards)." This regulatory guide will provide guidance to the industry on the radiological sabotage DBT. DG-5017 contains safeguards information and therefore, is being withheld from public disclosure and distributed on a need-to-know basis to those with who otherwise qualify for access.

NOTATION VOTE

RESPONSE SHEET


TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MERRIFIELD  
SUBJECT: **SECY-05-0106 - PROPOSED RULEMAKING TO  
REVISE 10 CFR 73.1, DESIGN BASIS THREAT  
(DBT) REQUIREMENTS**

Approved  Disapproved  Abstain

Not Participating

COMMENTS:

*See attached comments.*

  
\_\_\_\_\_  
SIGNATURE

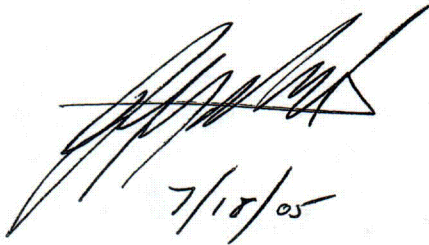
*7/20/05*  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No

Commissioner Merrifield's Comments on SECY-05-0106

I approve issuing SECY-05-0106, "Proposed Rulemaking to Revise 10 CFR 73.1, Design Basis Threat (DBT) Requirements," subject to the attached comments. I want to commend the staff for its efforts to develop a proposed rule that allows meaningful public comment on the proposed DBT attributes, while protecting safeguards and classified information from being compromised.

I believe it is imperative that the public be allowed to provide comment on the changes to the design basis threat requirements for nuclear facilities, an opportunity they understandably could not be given during the development of the security orders because of the NRC's need to act quickly and the sensitive nature of the detailed information conveyed in the orders. It is also just as important for the staff to evaluate the comments from all stakeholders, to ensure that the requirements to be codified in the final rule will provide adequate protection of the public health and safety and the common defense and security.



7/18/05

UNITED STATES NUCLEAR REGULATORY COMMISSION  
ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is proposing to revise the requirements in 10 CFR 73.1. Specifically, the proposed rule would revise the design basis threat (DBT) requirements for both radiological sabotage, which are generally applied to power reactors and Category I fuel cycle facilities, and theft or diversion of NRC-licensed Strategic Special Nuclear Material (SSNM), which are generally applied to Category I fuel cycle facilities. Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM. The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans. The rulemaking also considered a petition for rulemaking filed by the Committee to Bridge the Gap on July 23, 2004, (PRM-73-12) that pertains to the DBT.

ENVIRONMENTAL ASSESSMENT

Identification of the Action:

The principal objective of the proposed revision to the § 73.1(a) DBT rule is to consolidate the supplemental requirements put in place by the April 29, 2003, DBT orders with the existing DBTs requirements in § 73.1(a).

*Replace with the revised first paragraph from section III of the FRN*





## I. Statement of Problem and NRC Objectives

### (a) History and Background

The DBT requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. The Nuclear Regulatory Commission (NRC) requirements include protection against radiological sabotage (generally applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed SSNM (generally applied to Category I fuel cycle facilities). Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM. The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans.

Following the terrorist attacks on September 11, 2001, the NRC conducted a thorough review of security to ensure that nuclear power plants and other licensed facilities continued to have effective security measures in place for the changing threat environment. In so doing, the NRC recognized that some elements of the DBTs required enhancement due to the escalation of the domestic threat level. After soliciting and receiving comments from Federal, State, local agencies, and industry stakeholders, the NRC imposed by order supplemental DBT requirements which contained additional detailed adversary characteristics. The balance between licensee responsibilities and the responsibilities of the local, State and Federal Governments was considered during the development of the April 29, 2003, DBT orders.

The Commission's decision was based on the analysis of intelligence information regarding the trends and capabilities of the potential adversaries and discussions with Federal, law enforcement, and intelligence community agencies. These enhanced adversary characteristics are reflective of the new threat environment and are described in the April 29, 2003, DBT orders. In general terms, DBTs are comprised of attributes selected from the overall threat environment. The ACDs set forth the specific details of the attributes of the DBTs. The DBT technical basis document contains a basis for the specific adversary characteristics. These supplemental documents contain safeguards and classified information, and therefore, are withheld from public disclosure and only distributed on a need-to-know basis to persons with authorized access. The NRC's DBT is ~~not based on worst case scenarios but~~ rather on actual adversary characteristics demonstrated worldwide and a determination as to those characteristics against which a private security force could reasonably be expected to provide protection.

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders resulted in licensee security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening. Currently, all power

reactor and Category I fuel facilities have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.

### (b) Objective of Proposed Rulemaking

The proposed rulemaking would ~~consolidate the supplemental requirements put in place by the orders and the existing DBT requirements in § 73.1(a)~~ *redefine the level of security requirements necessary to ensure adequate protection of the public health and safety and common defense and security.* The proposed rule would describe the DBTs at a level of detail comparable to the current rule. Specific details related to the threat, which include both safeguards information and classified information, would be consolidated in adversary characteristics documents that would include requirements consistent with those in the DBT orders. The adversary characteristics documents would be available to those with authorized access. The proposed rulemaking would include the DBTs for both radiological sabotage (applied to power reactors and Category 1 fuel cycle facilities) and theft and diversion (Category 1 fuel cycle facilities). The proposed rulemaking would also consider the petition for rulemaking filed by the Committee to Bridge the Gap (PRM-73-12). ✓

### (c) Backfit Rule Concerns

*is place withdrawn in FRN* This proposed regulatory action would not involve the imposition of any new requirements. The approach selected for the proposed rule would not expand the DBTs beyond requirements currently in place under existing NRC regulations and orders. Consequently, the proposed § 73.1(a) amendments would not require existing licensees to make additional changes to their current NRC-approved security plans. As such, there would be no backfits involved with this regulatory action. ✓

## II. Analysis of Alternatives

There are basically two alternatives for addressing changes to the DBT requirements. Those alternatives are to take no additional regulatory action beyond the DBT orders (No Action Alternative) and rulemaking (of which there are three variations). These alternatives are discussed below in more detail.

### (a) No Action Alternative

This alternative is simply to take no additional regulatory action and, as a result, not revise the governing regulations in § 73.1(a) pertaining to DBT. This approach would continue the status quo, which is implementation of supplemented DBT requirements as imposed through the DBT orders. While this action would save the agency resources that it would expend revising the regulation, it would leave § 73.1(a) as is, and these requirements do not reflect the supplemented DBT requirements currently in place. As such, the regulations would not be up-to-date; this situation could introduce inefficiencies into the regulatory process. This alternative was not chosen since it is important to consolidate the DBT requirements and revise § 73.1(a) accordingly.

### (b) Rulemaking Alternatives

The second alternative is to revise § 73.1(a) DBT requirements. There are several different strategies for revising the requirements in the regulations. The strategies are:

## Executive Summary

The design basis threat (DBT) requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. The Nuclear Regulatory Commission (NRC) requirements include protection against radiological sabotage (applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed strategic special nuclear material (SSNM) (applied to Category I fuel cycle facilities). The DBTs are used by these licensees to form the basis for site-specific defensive strategies.

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders resulted in licensee security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening. Currently, all power reactor and Category I fuel facilities have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.

This draft regulatory analysis considers two alternatives <sup>to the proposed rule changes to</sup> ~~for consolidating the supplemental requirements put in place by the orders with~~ the DBT requirements in § 73.1(a). The proposed rulemaking also considers the petition for rulemaking (PRM) filed by the Committee to Bridge the Gap (PRM-73-12).

The first alternative is to take no additional regulatory action ("The No Action Alternative") beyond the DBT orders. Under this alternative, NRC would not revise the governing regulations in § 73.1 pertaining to DBT, but would continue the status quo, which is implementation of supplemented DBT requirements imposed through the DBT orders.

The second alternative, which was selected, is to revise the § 73.1 DBT requirements through rulemaking. Because the DBT involves the discussion of information that is either safeguards information or classified, three rulemaking strategies were evaluated for the most appropriate approach.

The strategy chosen is similar to the rulemaking practice the NRC used when the DBT requirements were last revised. Compared to the other strategies, this rulemaking approach would provide the public with the opportunity for meaningful comment and participation in the process. However, the public's participation and access to classified and safeguards information is limited to those who have a need-to-know and who otherwise qualify for access. The NRC selected this rulemaking strategy after carefully considering the balance between openness and the protection of sensitive information, as well as the need for complying with the notice-and-comment requirements of the Administrative Procedure Act. The details in the proposed rule would likely be assumed by potential adversaries but would not offer information that would assist adversaries in planning or carrying out an attack. At the same time, the proposed rule would include sufficient detail to enable comments from external stakeholders on NRC regulatory activities. By placing this information in the rule, the NRC concluded that the benefits gained by maintaining more openness in the NRC rulemaking process for § 73.1 exceeded the risks of releasing the information.

### (c) Conclusion Regarding Alternative Strategies

Based on the reasons discussed above, the NRC concludes that a rulemaking approach described in the third strategy is the best approach.

### III. Estimate and Evaluation of Values and Impacts

#### (a) Overview

This rulemaking would revise the governing regulations pertaining to the DBTs to more closely align the regulation with the actual requirements that were implemented by the April 29, 2003 DBT orders. This rulemaking would not impose any new requirements beyond those which have already been imposed through orders. A Petition for Rulemaking (PRM-73-12) is being considered as part of this rulemaking with the intention of determining whether DBT requirements need to be strengthened as the petitioner requests. The NRC is granting PRM-73-12 in part, and denying PRM in part (refer to Section V of the proposed rule notice). As a result of the DBT orders, licensees revised their security plans and submitted them for staff review and approval. The staff reviews were completed on October 29, 2004. Furthermore, this rulemaking would not impose any new information collection requirements.

This rulemaking would have no impact on plant risk. This rulemaking would not change the risk associated with security-related events from the current level because requirements that are currently in place per the orders, remain in place. Because there would be no net change in risk related to radiological sabotage or theft and diversion (the implemented orders have already addressed this), there would be no net change in potential value (in terms of reduced risk) due to this rulemaking.

There is value in pursuing this rulemaking, because revising § 73.1(a) requirements to more accurately reflect the implemented DBT requirements (with the constraint that certain information would not be revealed within § 73.1(a)), would further increase the regulatory coherency by updating the DBT requirements in § 73.1(a).

#### (b) Impacts on Licensees

Impacts upon the licensees from this proposed rulemaking would be minimal. Because the adversary characteristics would remain consistent with those promulgated by orders, no technical changes will be required. Licensees may need to update references in their security plan documentation, which could be accomplished without NRC review and in conjunction with future plan updates.

#### (c) Impacts to the NRC

- a. The primary impact on the NRC would be the resources expended in conducting this rulemaking; including the consolidation of security guidance related to the DBT. This guidance was developed during the post September 11, 2001, time frame; and was used by licensees to revise security plans per the new DBT. This effort is therefore, to consolidate the DBT guidance into stand-alone documents, not to revise or create the guidance.

*Revise consistent to the PRM*

## NUCLEAR REGULATORY COMMISSION

10 CFR Part 73

RIN 3150-AH60

## Design Basis Threat

AGENCY: Nuclear Regulatory Commission

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations

that govern the requirements pertaining to design basis threat (DBT). The proposed

*the proposed rule amends 10 CFR 573.16 in order to*  
~~amendment would consolidate the existing DBT requirements in § 73.1(a) with the~~  
*to redefine the level of security requirements necessary to ensure that*  
~~supplemental DBT requirements put in place by Commission orders issued on April 29, 2003~~  
*the public health and safety, and common defense and security are adequately protected.*  
~~(68 FR 24517, 68 FR 26675, 68 FR 26676).~~ The specific details related to the threat, which

contain both safeguards information (SGI) and classified information, are ~~consolidated~~ *contained* in adversary characteristics documents (ACDs) that are not publicly available. These documents include specific details of the attributes of the threat consistent with the requirements imposed in the April 29, 2003, DBT orders. The proposed rule would revise the DBT requirements for

radiological sabotage (applied to power reactors and Category I fuel cycle facilities pursuant to § 73.55(a) and § 73.20(a) respectively), and theft or diversion of NRC-licensed Strategic

Special Nuclear Material (SSNM) (applied to Category I fuel cycle facilities pursuant to

§ 73.20(a)). The NRC has developed draft Regulatory Guides (RGs) that provide guidance *to licensees*

concerning the DBT for radiological sabotage and theft and diversion. These draft RGs have limited distribution because they contain either safeguards or classified information.

Additionally, a Petition for Rulemaking (PRM -73-12), filed by the Committee to Bridge the Gap,

was considered as part of this proposed rulemaking; the NRC's disposition of this petition is

contained in this document.

## I. Background

The DBT requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. The NRC requirements include protection against radiological sabotage (generally applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed SSNM (generally applied to Category I fuel cycle facilities). Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM. The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans.

Following the terrorist attacks on September 11, 2001, the NRC conducted a thorough review of security to ensure that nuclear power plants and other licensed facilities continued to have effective security measures in place for the changing threat environment. In so doing, the NRC recognized that some elements of the DBTs required enhancement due to the escalation of the domestic threat level. After soliciting and receiving comments from Federal,

State, local agencies, and industry stakeholders, the NRC imposed by order supplemental

DBT requirements <sup>that</sup> contained additional detailed adversary characteristics. <sup>The Commission</sup> ~~The balance~~ *deliberated on the responsibilities of the local, State, and Federal governments to protect the nation, and the responsibility of licensees to protect individual nuclear facilities, before reaching consensus on a reasonable approach to security in the April 29, 2003 DBT orders.*

The Commission's decision was based on the analysis of intelligence information <sup>DBT orders.</sup> regarding the trends and capabilities of the potential adversaries and discussions with

Federal, law enforcement, and intelligence community agencies. These enhanced adversary

*After gaining experience under these orders over the past 2 years, the Commission believes that certain attributes of the 5 orders should be generically imposed on certain licensees.*

characteristics are reflective of the new threat environment and are described in the April 29, 2003, DBT orders. In general terms, DBTs are comprised of attributes selected from the overall threat environment. The ACDs set forth the specific details of the attributes of the DBTs. The DBT technical basis document contains a basis for the specific adversary characteristics. These supplemental documents contain safeguards and classified information, *that is distributed only to persons with authorized access* and therefore, ~~are withheld from public disclosure and only distributed~~ on a need-to-know basis ~~to persons with authorized access~~. The NRC's DBT is ~~not~~ based on ~~worst case scenarios but rather on~~ actual adversary characteristics demonstrated worldwide and a determination as to those characteristics against which a private security force could reasonably be expected to provide protection.

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders *required* ~~resulted in~~ *to make* licensee security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel,

including expanded, expedited, and more thorough ~~initial and follow-on screening~~ *of temporary and permanent workers.* *The NRC has reviewed and approved the revised security that were* ~~Currently, all power reactor and Category I fuel facilities have received NRC approval of~~ *developed and submitted by power reactor and Category I fuel facility* ~~security plans consistent with the DBTs imposed by the April 2003 orders.~~ *licensees in response to the April 2003 orders.*

## II. Rulemaking Initiation

On July 19, 2004, the staff issued a memorandum entitled "Status of Security-Related Rulemaking" to inform the Commission of plans to close two longstanding security-related actions and replace them with a comprehensive rulemaking plan to modify physical protection requirements for power reactors. This memorandum described rulemaking efforts that were preempted by the terrorist activities of September 11, 2001, and summarized the security-related actions taken following the attack. In response to this memorandum, the Commission directed the staff in an August 23, 2004, Staff Requirements Memorandum (SRM), to forego the development of a rulemaking plan and provide a schedule for the completion of 10 CFR 73.1, 73.55, and Part 73 Appendix B rulemakings. The requested schedule was provided to the Commission by memorandum dated November 16, 2004.

*The principal objective of the proposed rule is to redefine the level of security requirements necessary to ensure adequate protection of the public health and safety and the common defense and security.*

### III. Proposed Regulations

*Another*  
The principal objective of the proposed revision to the § 73.1(a) DBT rule is to incorporate the attributes of ~~consolidate the supplemental requirements put in place by the April 29, 2003, DBT orders~~ into ~~with~~ the existing DBTs requirements in § 73.1(a) in an expedited manner. During the development of this rule the staff identified several potential changes to the regulations that are not proposed at this time and which the staff does not consider necessary at this time to assure safety or security.

~~To achieve alignment with requirements imposed by order,~~ <sup>T</sup> the proposed rule would also revise certain exemptions for independent spent fuel storage installations (ISFSIs). The current DBT rule exempts ISFSIs from the land vehicle transport and land vehicle bomb threats contained in §§ 73.1(a)(1)(i)(E) and (a)(1)(iii), respectively. These exemptions should no longer be retained because the Commission issued orders to ISFSIs on October 16, 2002,

*that the Commission believes 7 should be generically applied to power reactors and Category I fuel facilities*



requiring ISFSIs to protect against these threats. ~~An exemption from the waterborne threat would be added for ISFSIs so that the proposed rule would be consistent with security requirements previously imposed by Commission orders.~~ The Staff evaluated the need for <sup>to</sup> ~~including waterborne requirements in the October 18, 2002, ISFSI orders~~ and concluded that other means in the ~~orders~~ <sup>to ISFSIs</sup> were sufficiently protective ~~that~~ <sup>to preclude the need for</sup> specific requirements ~~for~~ <sup>regarding</sup> waterborne ~~threats~~ <sup>threats</sup> were not required. ~~Consequently, an exemption from the waterborne threat has been added for ISFSIs in this proposed rule.~~ <sup>Consequently, an exemption from the waterborne threat has been added for ISFSIs in this proposed rule.</sup>

The proposed rule would also amend the exemption in the current § 73.1(a) for licensees subject to the provisions of § 73.20. The current rule exempts these licensees from the requirements to protect against vehicles transporting adversary personnel and equipment and the land vehicle bomb. The Commission <sup>has determined</sup> ~~DBT orders now~~, however, <sup>that due to the current threat environment</sup> require certain <sup>need</sup> licensees subject to § 73.20 (Category I fuel cycle facilities) <sup>to</sup> protect against such threats, so the exemption must be amended accordingly. The amended exemption would continue for other licensees described in 10 CFR § 73.20 (e.g., fuel reprocessing plants licensed under Part 50) ~~because the Commission has not issued any orders that would require the exemption to be eliminated.~~<sup>1</sup>

The approach proposed in this rulemaking maintains a level of detail in the § 73.1(a) rule language that is generally comparable to the current regulation, while updating the general DBT attributes in a manner consistent with the <sup>insights gained from the application of</sup> supplemental requirements imposed by the April 29, 2003, DBT orders. The result is a proposed rule with a level of detail that reflects all major features of the DBTs, yet avoids compromising licensee security by not publishing the specific tactical and operational capabilities of the DBT adversaries. The goal of this approach is to provide sufficient public notice of the upgrades to the DBTs, including

---

<sup>1</sup>Elimination of the exemption from the DBTs for fuel reprocessing plants should be considered if, in the near future, it appears a license application for such a facility will be filed. Fuel reprocessing plants would possess types and quantities of material requiring robust security. Elimination of the exemption is not being pursued here because of the limited scope of this rulemaking.

the new modes of attack that facilities must be prepared to defend against, so that meaningful public input is possible regarding the proposed rule's scope and content.

The NRC recognizes that some stakeholders may expect more detail than is set forth in the current or proposed DBT regulations. However, the more detail that is made publicly available about the specific capabilities of the DBT adversaries, the ~~more information that~~ <sup>greater the chance</sup> ~~would be available and that could be exploited by adversaries.~~ <sup>that potential adversaries could exploit that information</sup> If potential adversaries can readily identify the specific design bases for licensee security systems in a publicly available DBT regulation, then they could determine the force size and weapons types necessary to overcome these security systems. Disclosing such details as the specific weapons, ammunition, vehicles, and bomb sizes that licensees must be prepared to defend against could substantially assist an adversary in planning an attack.

On the other hand, it is important for the public to understand the types of attacks against which nuclear power plants and Category I fuel cycle facilities are required to defend. The public has a vital stake in the security of these facilities, as well as the right to meaningful comment when NRC proposes to amend its regulations. Understanding the general scope of the proposed DBT rule is necessary if the public is to exercise its right to meaningful comment and oversight of NRC regulations.

After carefully balancing these competing interests, the NRC arrived at the level of detail regarding the attributes of the DBT presented in the proposed rule. More specific details (e.g., specific weapons, ammunition, etc.,) are consolidated in ACDs which contain classified or safeguards information. The technical bases for the ACDs are derived largely from intelligence information, and also contain classified and safeguards information that cannot be publicly disclosed. These documents ~~will~~ <sup>must</sup> be withheld from public disclosure and made available <sup>only</sup> on a need-to-know basis to those who otherwise qualify for access.

The ACDs may be updated from time to time as a result of the NRC's periodic threat reviews, which NRC has been conducting since 1979. Those threat assessments are performed in conjunction with the intelligence and law enforcement communities to identify changes in the threat environment which may in turn require adjustment of NRC security requirements. Future revisions to the ACDs would not require changes to the DBT regulations in § 73.1, provided the changes remain within the scope of the rule text.

The NRC consulted with Federal, State, and local agencies, and with industry stakeholders in developing the updated DBTs. This consultation involved analysis of intelligence information regarding the trends and capabilities of potential adversaries, and discussion with Federal, law enforcement, and intelligence community agencies. Public comments and suggestions received in response to PRM-73-12 also informed the NRC's development of this proposed rule. The resolution of PRM-73-12, which is being granted in part <sup>through this rulemaking</sup> and ~~denied in part~~, is more fully discussed in Section V of this notice.

The Commission concludes that the proposed amendments to § 73.1 <sup>will continue to</sup> ensure adequate protection of public health and safety and the common defense and security by requiring the secure use and management of radioactive materials. The <sup>revised</sup> DBTs represent the largest threats against which private sector facilities must be able to defend with high assurance. The proposed amendments to § 73.1 would not expand the DBTs beyond requirements currently in place under existing NRC regulations and orders.

#### IV. Section by Section Analysis

The following table provides a comparison between the proposed rule text and the current rule text. ~~The changes are based on Commission order EA-03-086 All Power Reactor Licensees, Order Modifying License (Effective Immediately) dated April 29, 2003, Commission order EA-03-087 In the Matter of Nuclear Fuel Services, Inc., Erwin, TN, Order~~

~~Modifying License (Effective Immediately), dated April 29, 2003, in the Matter of BWX Technologies, Inc., Lynchburg, VA, Order Modifying License (Effective Immediately), dated April 29, 2003.~~



| Old  | New   | Change  |
|--|---|---|
| <p>(a) Purpose. This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used. The following design basis threats, where referenced in ensuing sections of this part, shall be used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft of special nuclear material. Licensees subject to the provisions of § 72.182, § 72.212, § 73.20, § 73.50, and § 73.60 are exempt from § 73.1(a)(1)(i)(E) and § 73.1(a)(1)(iii).</p> | <p>(a) Purpose. This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used. The following design basis threats, where referenced in ensuing sections of this part, shall be used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft or diversion of special nuclear material. Licensees subject to the provisions of § 73.20 (except for fuel cycle licensees authorized under part 70 of this chapter to receive, acquire, possess, transfer, use, or deliver for transportation formula quantities of strategic special nuclear material ), § 73.50, and § 73.60 are exempt from § 73.1(a)(1)(i)(E), § 73.1(a)(1)(iii), § 73.1(a)(1)(iv), § 73.1(a)(2)(iii) and § 73.1(a)(2)(iv). Licensees subject to the provisions of § 72.212, are exempt from § 73.1(a)(1)(iv).</p> | <p>The proposed paragraph is modified to clarify that the DBTs are designed to protect against diversion in addition to theft of special nuclear material.</p> <p>The proposed exemptions would be updated based on the order requirements and conforming changes to other paragraphs of this part.</p> |

|      |   |  |
|------|---|--|
| none | (2)(iii) A land vehicle bomb assault, which may be coordinated with an external assault, and  | The proposed paragraph would be updated to reflect that licensees are required to protect against a wide range of land vehicles. A new mode of attack not previously part of the DBT would be added indicating that adversaries may coordinate a vehicle bomb assault with another external assault. |
| none | (2)(iv) A waterborne vehicle bomb assault, which may be coordinated with an external assault. | The proposed paragraph would add a new mode of attack not previously part of the DBT, that being a waterborne vehicle bomb assault. This coordinated attack concept is another upgrade to the current regulation.  |

Additional guidance concerning the adversary characteristics is located in the corresponding draft regulatory guides (radiological sabotage in DG-5017 and theft and diversion in DG-5018). These draft RGs contain either safeguards or classified information and are not publicly available. ~~The DBT requirements in proposed § 73.1 and the adversary characteristic documents are consistent with the April 29, 2003, DBT orders and as a result would not impose any additional DBT requirements. As such, current licensees would not be~~

~~required to revise their security plans in response to the proposed § 73.1 requirements, nor would any additional reporting requirements be imposed.~~

#### V. Petition for Rulemaking (PRM-73-12)

As discussed above in this notice, the NRC staff reviewed PRM-73-12 to determine whether the regulations in Part 73 regarding the DBT should be amended in response to requests in PRM-73-12 and public comments received on the petition. PRM-73-12 was filed by the Committee to Bridge the Gap on July 23, 2004. The petition requests that the NRC amend its regulations to revise the DBT regulations (in terms of the numbers, teams, capabilities, planning, willingness to die and other characteristics of adversaries) to a level that encompasses, with a sufficient margin of safety, the terrorist capabilities evidenced by the attacks of September 11, 2001. The petition also requests that security plans, systems, inspections, and force-on-force exercises be revised in accordance with the amended DBT. Finally, the petition requests a requirement be added to Part 73 to construct shields against air attack (the shields are referred to as "beamhenge") which the petition asserts would enable nuclear power plants to withstand an air attack from a jumbo jet.

PRM-73-12 was published for public comment in the *Federal Register* on November 8, 2004 (69 FR 64690). The public comment period expired on January 24, 2005. There were 845 comments submitted on PRM-73-12, of which 528 were form letters. Many of the comments were submitted after the comment period expired; however, the staff reviewed and considered all of the comments. Comments were received from nine state attorneys general, approximately 20 public interest groups, a U.S. Congressman from Massachusetts, and six industry groups and licensees. In addition, two U.S. Senators and a U.S. Representative (all from New Jersey) requested an extension to the comment period. The bulk of the comments

licensees to protect against waterborne threats, a wider range of land vehicles, and coordinated attacks. All of these features of the proposed rule grant requests made in PRM-73-12.

The NRC intends to deny the other requests in PRM-73-12, specifically the aspects of PRM 73-12 which deal with the defense of nuclear power plants against aircraft. PRM-73-12 requests that NRC require licensees to defend against air attack by constructing a series of steel beams that would break apart an attacking plane before it could impact the facility. The structure is referred to as "beamhenge."

Federal efforts to protect the nation from terrorist attacks by air have increased substantially since September 11, 2001. Those efforts already include a variety of measures such as enhanced airline passenger and baggage screening, strengthened cockpit doors, and the federal Air Marshals program. Federal law enforcement and intelligence agencies have increased efforts to identify potential aircraft-related threats before they can be carried out. The Department of Defense and the Federal Aviation Administration have acted to protect airspace above a nuclear power plant in response to a threat at the time thought to be credible, but which was later determined to be non-credible. These and other government-wide efforts have improved protection against air attacks on all industrial facilities, both nuclear and non-nuclear. ✓

Following the September 11, 2001, attacks in New York, the Pentagon, and Pennsylvania, the NRC conducted assessments of the potential for and consequences of terrorists targeting a nuclear power plant for aircraft attack, the physical effects of such a strike, and compounding factors such as meteorology that would affect the impact of potential radioactive releases. As a result of these preliminary assessments, the NRC required nuclear power plant licensees to implement enhancements to mitigate potential consequences in the

unlikely event of a successful attack on a nuclear power plant. As part of a comprehensive review of security for NRC-licensed facilities, the NRC conducted detailed site-specific engineering studies of a limited number of <sup>representative</sup> nuclear power plants to assess potential vulnerabilities of deliberate attacks involving large commercial aircraft. In conducting these studies, the NRC drew on national experts from several Department of Energy laboratories <sup>3)</sup> using state-of-the-art structural and fire analyses. For the facilities analyzed, the vulnerability studies confirm that the likelihood of <sup>a large, commercial aircraft</sup> both damaging the reactor core and releasing radioactivity that could affect public health and safety is low. Even in the unlikely event of a radiological release due to terrorist use of a large aircraft, there would be sufficient time to implement mitigating actions and offsite emergency plans such that the NRC's emergency planning basis remains valid. Furthermore, the NRC staff will continue to review intelligence and threat reporting to recommend any appropriate modifications to the DBT or NRC requirements to mitigate air attacks. Therefore, based on the review of the petition and the considerations noted above, the NRC intends to deny this portion of PRM-73-12.

PRM-73-12 also requests that nuclear power plants be required to defend against more than the number of attackers that carried out the September 11, 2001 attacks, and identifies specific weapons that nuclear power plants should be able to defend against. The Commission cannot comment publicly on the precise numbers of attackers or types of weapons that nuclear power plants are required to defend against under the proposed DBTs and ACDs for reasons stated earlier in this notice. However, the Commission has conducted a thorough review of security to continue to ensure that nuclear power plants and other licensed facilities have effective security measures in place given the changing threat environment. An important part of this review was the consideration of a terrorist attack similar to that which occurred on September 11, 2001. However, the DBT is based upon



review and analysis of actual adversary characteristics demonstrated in a range of terrorist attacks worldwide and a determination as to ~~which~~ <sup>the</sup> attacks <sup>against which</sup> a private security force could reasonably be expected to defend ~~against~~.

In summary, the NRC grants PRM-73-12 in part by conducting this proposed rulemaking to revise the DBT requirements in § 73.1(a) to reflect certain specific requested changes contained in PRM-73-12 in the proposed rule text. ~~The NRC intends to deny the remainder of the petition.~~

#### VI. Guidance

*and current licensees in ensuring that their security plans meet the requirements in the proposed rule*

The NRC staff is preparing new regulatory guides, as listed below, to provide detailed guidance on the revised DBT requirements in proposed § 73.1. These guides are intended to assist future license applicants in the development of their security programs and plans. <sup>The new</sup> guidance ~~consolidates~~ <sup>incorporates the insights gained from applying the earlier</sup> other guidance that was used to develop, review, and approve the site security plans that licensees put in place in response to the April 2003 orders. As such, this regulatory guidance ~~would not~~ <sup>is not expected to</sup> cause current licensees to revise security measures at their facilities. The publication of the regulatory guides is planned to coincide with the publication of the final rule. The guides are described below.

1. Draft Regulatory Guide (DG-5017), "Guidance for the Implementation of the Radiological Sabotage Design-Basis Threat (Safeguards)." This regulatory guide will provide guidance to the industry on the radiological sabotage DBT. DG-5017 contains safeguards information and <sup>②</sup> therefore, is being withheld from public disclosure and distributed on a need-to-know basis to those ~~with~~ who otherwise qualify for access.

2. Draft Regulatory Guide (DG-5018), "Guidance for the Implementation of the Theft and Diversion Design-Basis Threat (Classified)." This regulatory guide will provide guidance

to the industry on the theft or diversion DBT. DG-5018 contains classified information and <sup>2</sup> therefore <sup>3</sup> is withheld from public disclosure and distributed <sup>only</sup> on a need to know basis to those who otherwise qualify for access. ✓

### VII. Criminal Penalties

For the purposes of Section 223 of the Atomic Energy Act, as amended, the Commission is issuing the proposed rule to revise § 73.1 under one or more sections of 161 of the Atomic Energy Act of 1954 (AEA). Criminal penalties, as they apply to regulations in Part 73 are discussed in § 73.81. ✓

### VIII. Compatibility of Agreement State Regulations

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 AEA or the provisions of Title 10 of the Code of Federal Regulations, and although an Agreement State may not adopt program elements reserved to 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, but does not confer regulatory authority on the State.

own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the size standards established by the NRC (10 CFR 2.810).

#### XVI. Backfit analysis

The NRC has determined, pursuant to the exception in 10 CFR § 50.109(a)(4)(iii) <sup>3</sup>  
~~The NRC has determined that the backfit rule does not apply to this proposed rule. A~~  
~~that a backfit analysis is unnecessary for this proposed rule. Section 50.109 states in pertinent~~  
~~backfit analysis is not required for this proposed rule because these amendments do not~~  
~~part that a backfit analysis is not required if the Commission finds and declares that~~  
~~impose more stringent requirements on licensees. Current DBT requirements were imposed~~  
~~a "regulatory action involves defining or redefining what level of protection to the public~~  
~~by orders dated April 29, 2003, and implemented through the revised and NRC approved~~  
~~health and safety or common defense and security should be regarded as adequate."~~  
~~security plans for each licensee. The proposed DBT requirements for § 73.1 are the same as~~  
In this proposed rule, the Commission has prescribed a new level of security  
~~those imposed by the DBT orders.~~ requirements that it deems necessary to protect  
nuclear facilities against potential terrorists.

#### List of Subjects in 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 Part 73.

When the Commission imposed security enhancements by order in April 2003,  
it did so in response to an escalated domestic threat level. Since that time,  
the Commission has continued to monitor intelligence reports regarding  
plausible threats from terrorists currently facing the U.S. The Commission  
has also gained experience from implementing the order requirements and  
reviewing revised licensee security plans. The Commission has considered all  
of this information and finds that the proposed rule redefines the level of  
security requirements necessary to ensure that the public health and  
safety and common defense and security are adequately protected in the current,  
post-9/11 threat environment.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER JACZKO

SUBJECT: **SECY-05-0106 - PROPOSED RULEMAKING TO  
REVISE 10 CFR 73.1, DESIGN BASIS THREAT  
(DBT) REQUIREMENTS**

Approved  Disapproved  Abstain

Not Participating

COMMENTS: See attached comments

  
\_\_\_\_\_  
SIGNATURE

8/19/05  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No

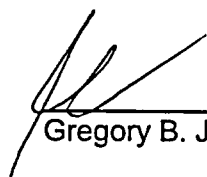
**Commissioner Jaczko's Comments on SECY-05-0106  
Proposed Rulemaking to Revise 10 CFR 73.1, Design Basis Threat (DBT) Requirements**

I approve the publication of the Federal Register Notice containing the proposed rule for public comment subject to the attached edits reflecting the requirements of the Energy Policy Act of 2005, deferring the Petition for Rulemaking (PRM-73-12), and other changes as reflected in the discussion below. I commend the staff for developing an approach to this rulemaking that provides for meaningful stakeholder involvement without revealing information that could be of use to a potential adversary and agree that here, as in all instances, meaningful comment on the proposed rule will strengthen the rulemaking record.

I do not support language in the Federal Register Notice that suggests or implies that the NRC has predetermined that the DBT rule does not need to provide for protection against airborne attack. The staff's proposal indicates the Commission has carefully considered including an airborne attack in the proposed DBT rule, but has determined it is not necessary. Because this is a proposed rule, the purpose here is to obtain public comments *before* the agency makes a final decision. Thus, the staff should use this rulemaking as an opportunity to discuss this issue in detail, especially as it relates to new reactors.

Amending the regulations to require existing facilities to defend against airborne attack as requested in PRM-73-12 may not be feasible. The Commission has decided, however, that existing plants are required to employ mitigative strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities using existing or readily available resources that can be effectively implemented under the circumstances associated with loss of large areas of the plant due to explosions or fire. The next generation of nuclear power plants are designed to be inherently safer than the existing fleet. They also need to be inherently more secure by design. Thus, the design of the new reactors should greatly reduce or eliminate the need for the mitigation strategies required of the current fleet.

For new plants this proposed rule provides an opportunity to discuss and consider rethinking our current concepts of physical protection by engineering protection against postulated security threats into the design of the facility. Therefore, the staff should specifically seek public comment on designing new nuclear facilities to withstand an aircraft attack and optimizing facility design to reduce reliance upon traditional physical protection system components and personnel.

  
\_\_\_\_\_  
Gregory B. Jaczko      8/19/05  
Date

Key = [ ] - Commissioner Jaczko endorses Chairman's ed's.  
Other - Commissioner Jaczko comment [7590-01-P]

## NUCLEAR REGULATORY COMMISSION

10 CFR Part 73

RIN 3150-AH60

### Design Basis Threat

AGENCY: Nuclear Regulatory Commission

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations that govern the requirements pertaining to design basis threat (DBT). [The proposed rule would amend 10 CFR 73.1 (a) to make generically applicable the security requirements previously imposed by the Commission's April 29, 2003 DBT orders, which applied to existing licensees, and redefine the level of security requirements necessary to ensure that the public health and safety and common defense and security are adequately protected.] [The proposed amendment would consolidate the existing DBT requirements in § 73.1(a) with the supplemental DBT requirements put in place by Commission orders issued on April 29, 2003 (68 FR 24517, 68 FR 26675, 68 FR 26676). The specific details related to the threat, which contain both safeguards information (SGI) and classified information, are consolidated in adversary characteristics documents (ACDs) that are not publicly available. These documents include specific details of the attributes of the threat consistent with the requirements imposed in the April 29, 2003, DBT orders.] The proposed rule would revise the DBT requirements for radiological sabotage (applied to power reactors and Category I fuel cycle facilities pursuant to § 73.55(a) and § 73.20(a) respectively), and theft or diversion of NRC-licensed Strategic Special Nuclear Material (SSNM) (applied to Category I fuel cycle facilities pursuant to § 73.20(a)). The NRC has developed draft Regulatory Guides (RGs) that provide guidance to licensees concerning the DBT for radiological sabotage and theft and diversion. These draft RGs have limited

distribution because they contain either safeguards or classified information. [The specific details related to the threat, which contain both safeguards information (SGI) and classified information, are consolidated contained in adversary characteristics documents (ACDs) that are not publicly available. These documents include specific details of the attributes of the threat consistent with the requirements imposed in the April 29, 2003, DBT orders.] Additionally, a Petition for Rulemaking (PRM -73-12), filed by the Committee to Bridge the Gap, was considered as part of this proposed rulemaking; the NRC's disposition of this petition is contained in this document.

**DATE:** Submit comments by [insert date 75 days after publication in the *Federal Register*.] Comments received after this date will be considered if it is practical to do so, but the Commission is able to ensure consideration only for comments received on or before this date.

**ADDRESSES:** You may submit comments by any one of the following methods. Please include the following number RIN 3150-AH60 in the subject line of your comments. Comments on rulemakings submitted in writing or in electronic form will be made available for public inspection. 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.

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

E-mail comments to: [SECY@nrc.gov](mailto:SECY@nrc.gov). If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at (301) 415-1966. You may also submit comments via the NRC's rulemaking web site at <http://ruleforum.llnl.gov>. Address questions

## I. Background

The DBT requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. ~~These~~ NRC requirements include protection against radiological sabotage (generally applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed SSNM (generally applied to Category I fuel cycle facilities). ~~Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM.~~ The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans.

Following the terrorist attacks on September 11, 2001, the NRC conducted a thorough review of security to ensure that nuclear power plants and other licensed facilities continued to have effective security measures in place for the changing threat environment. In so doing, the NRC recognized that some elements of the DBTs required enhancement due to the escalation of the domestic threat level. After soliciting and receiving comments from Federal, State, local agencies, and industry stakeholders, the NRC imposed by order supplemental DBT requirements which that contained additional detailed adversary characteristics. ~~The balance between licensee responsibilities and the responsibilities of the local, State and Federal Governments was considered during the development of the April 29, 2003, DBT orders.~~ The Commission deliberated on the responsibilities of the local, State, and Federal governments to protect the nation, and the responsibility of licensees to protect individual nuclear facilities, before reaching consensus on a reasonable approach to security in the April



29, 2003 DBT orders. After gaining experience under the orders over the past two years, the Commission believes that attributes of the orders should be generically imposed. ]

The Commission's decision was based on the analysis of intelligence information regarding the trends and capabilities of the potential adversaries and discussions with Federal, law enforcement, and intelligence community agencies. These enhanced adversary characteristics are reflective of the new threat environment [and are described in the April 29, 2003, DBT orders]. In general terms, DBTs are comprised of attributes selected from the overall threat environment. The ACDs set forth the specific details of the attributes of the DBTs. The DBT technical basis document contains a basis for the specific adversary characteristics. These supplemental documents contain safeguards and classified information [and therefore, are withheld from public disclosure and only distributed on a need-to-know basis to persons with authorized access] that is distributed only to persons with authorized access and on a need-to-know basis. The NRC's DBT is not based on worst-case scenarios but rather on actual demonstrated adversary characteristics demonstrated worldwide ] and a determination as to those characteristics against which a private security force could reasonably be expected to provide protection.

The April 29, 2003; DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders [resulted] required in licensees to make [security enhancements] such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site

access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening of temporary and permanent workers. The NRC has reviewed and approved the revised security plans that were developed and submitted by power reactor and Category I fuel cycle facility licensees in response to the April 2003 orders. ~~Currently, all power reactor and Category I fuel facilities have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.~~

## II. Rulemaking Initiation

On July 19, 2004, the staff issued a memorandum entitled "Status of Security-Related Rulemaking" to inform the Commission of plans to close two longstanding security-related actions and replace them with a comprehensive rulemaking plan to modify physical protection requirements for power reactors. This memorandum described rulemaking efforts that were preempted by the terrorist activities of September 11, 2001, and summarized the security-related actions taken following the attack. In response to this memorandum, the Commission directed the staff in an August 23, 2004, Staff Requirements Memorandum (SRM), to forego the development of a rulemaking plan and provide a schedule for the completion of 10 CFR 73.1, 73.55, and Part 73 Appendix B rulemakings. The requested schedule was provided to the Commission by memorandum dated November 16, 2004.

## III. Proposed Regulations

The principal objectives of the proposed rule are to make generically applicable the security requirements previously imposed by the Commission's April 29, 2003 DBT orders, and to define in NRC regulations the level of security necessary to ensure adequate protection of the public health and safety and common defense and security. ~~revision to the § 73.1(a) DBT rule is to consolidate the supplemental requirements put in place by the April 29, 2003, DBT orders in the existing DBTs requirements in § 73.1(a) in an expedited manner. During the development of this rule the staff identified several potential changes to the regulations that are not proposed at this time and which the staff does not consider necessary at this time to assure safety or security.~~

The Commission <sup>continues to</sup> ~~has considered and will~~ consider many factors in developing the proposed DBT and other security requirements. As directed by Congress under section 651 (a) of the recently enacted Energy Policy Act of 2005, the NRC is giving consideration to the following 12 factors as part of this rulemaking to revise the design basis threats:

1. The events of September 11, 2001;
2. An assessment of physical, cyber, biochemical, and other terrorist threats;
3. The potential for attack on facilities by multiple coordinated teams of a large number of individuals;
4. The potential for assistance in an attack from several persons employed at the facility;
5. The potential for suicide attacks;
6. The potential for water-based and air-based threats;
7. The potential use of explosive devices of considerable size and other modern weaponry;

8. The potential for attacks by persons with a sophisticated knowledge of facility operations;
9. The potential for fires, especially fires of long duration;
10. The potential for attacks on spent fuel shipments by multiple coordinated teams of a large number of individual;
11. The adequacy of planning to protect the public health and safety at an around nuclear facilities, as appropriate, in the event of a terrorist attack against a nuclear facility; and
12. The potential for theft and diversion of nuclear material for such facilities. ]

[ A number of these factors are already reflected in the text of the proposed rule.

For example, the proposed rule would require protection against suicidal attackers, insiders, and waterborne threats. Some of these factors are not included in the proposed rule. For Specifically ~~example, the Commission has carefully considered including an airborne attack in the proposed DBT rule, but has not included a specific attribute of air-based threats, largely for the reasons set forth in Section V below.~~ ~~of an air-based attack.~~ ~~proposed DBT rule, but has not included a specific attribute of air-based threats, largely for the reasons set forth in Section V below.~~ The Commission invites and looks forward to public comment on the proposed rule provisions, as well as whether or how the 12 factors should be addressed in the DBT rule. The Commission will further consider and resolve any comments received in the final rule. ]

~~To achieve alignment with requirements imposed by order,~~ The proposed rule would also revise certain exemptions for independent spent fuel storage installations (ISFSIs). The current DBT rule exempts ISFSIs from the land vehicle transport and land vehicle bomb threats contained in §§ 73.1(a)(1)(i)(E) and (a)(1)(iii), respectively. These exemptions should no longer be retained because the Commission issued orders to ISFSIs on October 16, 2002, requiring ISFSIs to protect against these threats. ~~An exemption from the waterborne threat would be added for ISFSIs so that the proposed rule would be consistent with security requirements previously imposed by Commission orders.~~ The Staff evaluated the need for to apply including waterborne requirements to ISFSIs in the October 16, 2002, ISFSI orders and concluded that other means in the orders proposed rule were sufficiently protective that to preclude the need for specific requirements for regarding waterborne threats were not required. Consequently, an exemption from the waterborne threat has been added for ISFSIs in the proposed rule.

The proposed rule would also amend the exemption in the current § 73.1(a) for licensees subject to the provisions of § 73.20. The current rule exempts these licensees from the requirements to protect against vehicles transporting adversary personnel and equipment and the land vehicle bomb. The Commission's ~~DBT orders now,~~ has determined, however, ~~require~~ that due to the current threat environment certain licensees subject to § 73.20 (Category I fuel cycle facilities) need to protect against such threats, so the exemption must be amended accordingly. The amended exemption would continue for other licensees described in 10 CFR § 73.20 (e.g., fuel reprocessing plants licensed under Part 50) because

~~the Commission has not issued any orders that would require the exemption to be eliminated.<sup>†</sup>~~

The approach proposed in this rulemaking maintains a level of detail in the § 73.1(a) rule language that is generally comparable to the current regulation, while updating the general DBT attributes in a manner consistent with the insights gained from the application of supplemental security requirements imposed by the April 29, 2003, DBT orders. The result is a proposed rule with a level of detail that reflects all major features of the DBTs, yet avoids compromising licensee security by not publishing the specific tactical and operational capabilities of the DBT adversaries. The goal of this approach is to provide sufficient public notice of the upgrades to the DBTs, including the new modes of attack that facilities must be prepared to defend against, so that meaningful public input is possible regarding the proposed rule's scope and content.

The NRC recognizes that some stakeholders may expect more detail than is set forth in the current or proposed DBT regulations. However, the more detail that is made publicly available about the specific capabilities of the DBT adversaries, the greater the chance that potential adversaries could exploit that information ~~more information that would be available and that could be exploited by adversaries.~~ If potential adversaries can readily identify the ~~specific design bases for licensee security systems in a publicly available DBT regulation, then they could determine the force size and weapons types necessary to overcome these security systems.~~ Disclosing The disclosure of such details as the specific weapons, force size, ammunition, vehicles, and bomb sizes that licensees must be prepared to defend against could substantially assist an adversary in planning an attack.

---

<sup>†</sup>~~Elimination of the exemption from the DBTs for fuel reprocessing plants should be considered if, in the near future, it appears a license application for such a facility will be filed. Fuel reprocessing plants would possess types and quantities of material requiring robust security. Elimination of the exemption is not being pursued here because of the limited scope of this rulemaking.~~

On the other hand, it is important for the public to ~~understand~~ be informed of the types of attacks against which nuclear power plants and Category I fuel cycle facilities are required to defend. The public has a vital stake in the security of these facilities, as well as the right to meaningful comment when NRC proposes to amend its regulations. Understanding the general scope of the proposed DBT rule is necessary if the public is to exercise its right to meaningful comment and oversight of NRC regulations.

After carefully balancing these competing interests, the NRC arrived at the level of detail regarding the attributes of the DBT presented in the proposed rule. More specific details (e.g., specific weapons, ammunition, etc.,) are consolidated in ACDs, which contain classified or safeguards information. The technical bases for the ACDs are derived largely from intelligence information, and also contain classified and safeguards information that cannot be publicly disclosed. These documents ~~will~~ ~~must~~ be withheld from public disclosure and made available ~~only~~ on a need-to-know basis to those who otherwise qualify for access.

The ACDs may be updated from time to time as a result of the NRC's periodic threat reviews, which NRC has been conducting since 1979. Those threat assessments are performed in conjunction with the intelligence and law enforcement communities to identify changes in the threat environment which may in turn require adjustment of NRC security requirements. Future revisions to the ACDs would not require changes to the DBT regulations in § 73.1, provided the changes remain within the scope of the rule text.

The NRC consulted with Federal, State, and local agencies, and with industry stakeholders in developing the updated DBTs. This consultation involved analysis of intelligence information regarding the trends and capabilities of potential adversaries, and discussion with Federal, law enforcement, and intelligence community agencies. Public comments and suggestions received in response to PRM-73-12; also informed the NRC's



development of this proposed rule. The resolution of PRM-73-12, which is being granted in part and denied in part through this rulemaking, is more fully discussed in Section V of this notice.

The Commission concludes that the proposed amendments to § 73.1 will continue to ensure adequate protection of public health and safety and the common defense and security by requiring the secure use and management of radioactive materials. The revised DBTs represent the largest threats against which private sector facilities must be able to defend with high assurance. The proposed amendments to § 73.1 would not expand the DBTs beyond reflects requirements currently in place under existing NRC regulations and orders.

IV. Section by Section Analysis

The following table provides a comparison between the proposed rule text and the current rule text. The changes are based on Commission order EA-03-086 *All Power Reactor Licensees; Order Modifying License (Effective Immediately)* dated April 29, 2003; Commission order EA-03-087 *In the Matter of Nuclear Fuel Services, Inc., Erwin, TN; Order Modifying License (Effective Immediately)*, dated April 29, 2003; *In the Matter of BWX Technologies, Inc., Lynchburg, VA; Order Modifying License (Effective Immediately)*, dated April 29, 2003.

| Old | New | Change |
|-----|-----|--------|
|-----|-----|--------|

|      |   |   |
|------|---|---|
| none | (2)(iv) A waterborne vehicle bomb assault, which may be coordinated with an external assault. | The proposed paragraph would add a new mode of attack not previously part of the DBT, that being a waterborne vehicle bomb assault. This coordinated attack concept is another upgrade to the current regulation. |
|------|---|---|

Additional guidance concerning the adversary characteristics is located in the corresponding draft regulatory guides (radiological sabotage in DG-5017 and theft and diversion in DG-5018). These draft RGs contain either safeguards or classified information and are not publicly available. ~~The DBT requirements in proposed § 73.1 and the adversary characteristic documents are consistent with the April 29, 2003, DBT orders and as a result would not impose any additional DBT requirements. As such, current licensees would not be required to revise their security plans in response to the proposed § 73.1 requirements, nor would any additional reporting requirements be imposed.~~

#### V. Petition for Rulemaking (PRM-73-12)

As discussed above in this notice, the NRC staff reviewed PRM-73-12 to determine whether the regulations in Part 73 regarding the DBT should be amended in response to requests in PRM-73-12 and public comments received on the petition. PRM-73-12 was filed by the Committee to Bridge the Gap on July 23, 2004. The petition requests that the NRC amend its regulations to revise the DBT regulations (in terms of the numbers, teams, capabilities, planning, willingness to die and other characteristics of adversaries) to a level

The table contains the NRC's responses to the issues raised by public comments, but the responses to comments do not include a detailed comparison of the differences between the current DBT requirements (as imposed by the April 29, 2003 orders) and the requests in PRM-73-12. Such a comparison could reveal the limits of the proposed DBT rule, thereby compromising security. The NRC's post-September 11, 2001, review of security requirements encompassed all the issues raised by the petitioner, and a number of the petitioner's requested changes to the DBT have been incorporated into the proposed DBT amendments as discussed below.

The NRC is partially granting PRM-73-12 by conducting this proposed rulemaking to revise the DBT requirements in § 73.1(a). Some of the requested changes in PRM-73-12 are reflected in the proposed rule text. These changes include the proposed requirements in §§ 73.1(a)(1)(i) and (a)(2)(i) that licensees be required to protect against one or more teams of adversaries operating from multiple entry points. PRM-73-12 also requested that the DBT regulation make clear that adversaries are willing to kill and be killed. This change is reflected in proposed §§ 73.1(a)(1)(i)(A) and (a)(2)(i)(A). The proposed rule would also require licensees to protect against waterborne threats, a wider range of land vehicles, and coordinated attacks. All of these features of the proposed rule grant requests made in PRM-73-12.

[ The NRC intends to deny defer action on the other requests in PRM-73-12, specifically those aspects of PRM 73-12 which deal with the defense of nuclear power plants against aircraft, and to address those issues as part of the final action on this proposed rule. ] [ PRM-73-12 requests that NRC require licensees to defend against air attack by constructing a series of steel beams that would break apart an attacking plane before it could impact the facility. The structure is referred to as "beamhenge." ]

[ Federal and other governmental ] efforts to protect the nation from terrorist attacks by air have increased substantially since September 11, 2001. Those efforts already include a variety of measures such as enhanced airline passenger and baggage screening, strengthened cockpit doors, and the federal Air Marshals program. Federal law enforcement and intelligence agencies have increased efforts to identify potential aircraft-related threats before they can be carried out. The Department of Defense and the Federal Aviation Administration have acted to protect airspace above a nuclear power plant in response to a threat at the time thought to be credible, but which was later determined to be non-credible. These and other governmental-wide efforts have improved protection against air attacks on all industrial facilities, both nuclear and non-nuclear.

Following the September 11, 2001, attacks in New York, the Pentagon, and Pennsylvania, the NRC conducted assessments of the potential for and consequences of terrorists targeting a nuclear power plant for aircraft attack, the physical effects of such a strike, and compounding factors such as meteorology that would affect the impact of potential radioactive releases. [ As a result of these preliminary assessments ] Furthermore, the NRC required nuclear power plant licensees to implement enhancements to mitigate potential consequences in the unlikely event of an ~~successful~~ attack, including aircraft, on a nuclear power plant. ~~As part of a comprehensive review of security for NRC-licensed facilities, the NRC conducted detailed site-specific engineering studies of a limited number of representative nuclear power plants to assess potential vulnerabilities of deliberate attacks involving large commercial aircraft. In conducting these studies, the NRC drew on national experts from several Department of Energy laboratories, using state-of-the-art structural and fire analyses. For the facilities analyzed, the vulnerability studies confirm that the likelihood of a large, commercial aircraft both damaging the reactor core and releasing radioactivity that~~

~~could affect public health and safety is low. Even in the unlikely event of a radiological release due to terrorist use of a large aircraft, there would be sufficient time to implement mitigating actions and offsite emergency plans such that the NRC's emergency planning basis remains valid. Furthermore, the NRC staff will continue to review intelligence and threat reporting to recommend any appropriate modifications to the DBT or NRC requirements to mitigate air attacks. Therefore, based on the review of the petition and the considerations noted above, the NRC intends to deny this portion of PRM-73-12.~~

PRM-73-12 also requests that nuclear power plants be required to defend against more than the number of attackers that carried out the September 11, 2001 attacks, and identifies specific weapons that nuclear power plants should be able to defend against. The Commission cannot comment publicly on the precise numbers of attackers or types of weapons that nuclear power plants are required to defend against under the proposed DBTs and ACDs for reasons stated earlier in this notice. However, the Commission has conducted a thorough review of security to continue to ensure that nuclear power plants and other licensed facilities have effective defensive capabilities and security measures in place given the changing threat environment. An important part of this review was the consideration of a terrorist attack similar to that which occurred on September 11, 2001. However, the DBT is based upon review and analysis of actual demonstrated adversary characteristics demonstrated in a range of terrorist attacks, worldwide and a determination as to which the attacks against which a private security force could reasonably be expected to defend against.

In summary, the NRC grants PRM-73-12 in part by conducting this proposed rulemaking to revise the DBT requirements in § 73.1(a) to reflect certain specific requested changes contained in PRM-73-12 in the proposed rule text, and is deferring action on other

requests in PRM-73-12, specifically those aspects of PRM-73-12 which deal with air-based attacks. ~~The NRC intends to deny the remainder of the petition.~~

## VI. Guidance

The NRC staff is preparing new regulatory guides, as listed below, to provide detailed guidance on the revised DBT requirements in proposed § 73.1. These guides are intended to assist current licensees in ensuring that their security plans meet the requirements in the proposed rule, as well as future license applicants in the development of their security programs and plans. The new guidance incorporates the insights gained from applying the earlier ~~consolidates other~~ guidance that was used to develop, review, and approve the site security plans that licensees put in place in response to the April 2003 orders. As such, this regulatory guidance ~~would not~~ is expected to be consistent with revised security measures at ~~cause current licensees' to revise security measures at their facilities.~~ The publication of the regulatory guides is planned to coincide with the publication of the final rule. The guides are described below.

1. Draft Regulatory Guide (DG-5017) , "Guidance for the Implementation of the Radiological Sabotage Design-Basis Threat (Safeguards)." This regulatory guide will provide guidance to the industry on the radiological sabotage DBT. DG-5017 contains safeguards information, and therefore, is being withheld from public disclosure and distributed on a need-to-know basis to those ~~with~~ who otherwise qualify for access.

2. Draft Regulatory Guide (DG-5018), "Guidance for the Implementation of the Theft and Diversion Design-Basis Threat (Classified)." This regulatory guide will provide guidance to the industry on the theft or diversion DBT. DG-5018 contains classified information and

therefore, is withheld from public disclosure and distributed only on a need to know basis to those who otherwise qualify for access.

#### VII. Criminal Penalties


For the purposes of Section 223 of the Atomic Energy Act, as amended, the Commission is issuing the proposed rule to revise § 73.1 under one or more sections of 161 of the Atomic Energy Act of 1954 (AEA). Criminal penalties, as they apply to regulations in Part 73 are discussed in § 73.81.

#### VIII. Compatibility of Agreement State Regulations

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 AEA or the provisions of Title 10 of the Code of Federal Regulations, and although an Agreement State may not adopt program elements reserved to 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, but does not confer regulatory authority on the State.

own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the size standards established by the NRC (10 CFR 2.810).

#### XVI. Backfit analysis

 The NRC has determined that the backfit rule does not apply to this proposed rule. A backfit analysis is not required for this proposed rule because these amendments do not impose more stringent requirements on licensees. Current DBT requirements were imposed by orders dated April 29, 2003, and implemented through the revised and NRC-approved security plans for each licensee. The proposed DBT requirements for § 73.1 are the same as those imposed by the DBT orders. The NRC determined, pursuant to the exception in 10 CFR 50.109 (a)(4)(iii), that a backfit analysis is unnecessary for this proposed rule. Section 50.109 states in pertinent part that a backfit analysis is not required if the Commission finds and declares that a "regulatory action involves defining or redefining what level of protection to the public health and safety or common defense and security should be regarded as adequate." The proposed rule would increase the security requirements currently prescribed in NRC regulations, and is necessary to protect nuclear facilities against potential terrorists. When the Commission imposed security enhancements by order in April 2003, it did so in response to an escalated domestic threat level. Since that time, the Commission has continued to monitor intelligence reports regarding plausible threats from terrorists currently facing the U.S. The Commission has also gained experience from implementing the order requirements and reviewing revised licensee security plans. The Commission has considered all of this information and finds that the security requirements previously imposed by DBT orders, which applied only to existing licensees, should be made generically applicable. The Commission further finds that the proposed rule would redefine the security



---

---

**Regulatory Analysis of Proposed Rule, 10 CFR Part  
73.1- Design Basis Threat**

---

---

**U.S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation**

**June 2005**



## Executive Summary

The design basis threat (DBT) requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. The Nuclear Regulatory Commission (NRC) requirements include protection against radiological sabotage (applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed strategic special nuclear material (SSNM) (applied to Category I fuel cycle facilities). The DBTs are used by these licensees to form the basis for site-specific defensive strategies.

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders resulted in licensee security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening. Currently, all power reactor and Category I fuel facilities have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.

This draft regulatory analysis considers two alternatives to the proposed rule changes to for consolidating the supplemental requirements put in place by the orders with the DBT requirements in § 73.1(a). The proposed rulemaking also considers the petition for rulemaking (PRM) filed by the Committee to Bridge the Gap (PRM-73-12).

The first alternative is to take no additional regulatory action ("The No Action Alternative") beyond the DBT orders. Under this alternative, NRC would not revise the governing regulations in § 73.1 pertaining to DBT, but would continue the status quo, which is implementation of supplemented DBT requirements imposed through the DBT orders.

The second alternative, which was selected, is to revise the § 73.1 DBT requirements through rulemaking. Because the DBT involves the discussion of information that is either safeguards information or classified, three rulemaking strategies were evaluated for the most appropriate approach.

The strategy chosen is similar to the rulemaking practice the NRC used when the DBT requirements were last revised. Compared to the other strategies, this rulemaking approach would provide the public with the opportunity for meaningful comment and participation in the process. However, the public's participation and access to classified and safeguards information is limited to those who have a need-to-know and who otherwise qualify for access. The NRC selected this rulemaking strategy after carefully considering the balance between openness and the protection of sensitive and classified information, as well as the need for complying with the notice-and-comment requirements of the Administrative Procedure Act. The details in the proposed rule would likely be assumed by potential adversaries but would not offer information that would assist adversaries in planning or carrying out an attack. At the same time, the proposed rule would include sufficient detail to enable comments from external stakeholders on NRC regulatory activities. By placing this information in the rule, the NRC concluded that the benefits gained by maintaining more openness in the NRC rulemaking process for § 73.1 exceeded the risks of releasing the information.

## I. Statement of Problem and NRC Objectives

### (a) History and Background

The DBT requirements in 10 CFR 73.1(a) describe general adversary characteristics that designated licensees must defend against with high assurance. The Nuclear Regulatory Commission (NRC) requirements include protection against radiological sabotage (generally applied to power reactors and Category I fuel cycle facilities) and theft or diversion of NRC-licensed SSNM (generally applied to Category I fuel cycle facilities). Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM. The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans.

Following the terrorist attacks on September 11, 2001, the NRC conducted a thorough review of security to ensure that nuclear power plants and other licensed facilities continued to have effective security measures in place for the changing threat environment. In so doing, the NRC recognized that some elements of the DBTs required enhancement due to the escalation of the domestic threat level. After soliciting and receiving comments from Federal, State, local agencies, and industry stakeholders, the NRC imposed by order supplemental DBT requirements which contained additional detailed adversary characteristics. The balance between licensee responsibilities and the responsibilities of the local, State and Federal Governments was considered during the development of the April 29, 2003, DBT orders.

The Commission's decision was based on the analysis of intelligence information regarding the trends and capabilities of the potential adversaries and discussions with Federal, law enforcement, and intelligence community agencies. These enhanced adversary characteristics are reflective of the new threat environment and are described in the April 29, 2003, DBT orders. In general terms, DBTs are comprised of attributes selected from the overall threat environment. The ACDs set forth the specific details of the attributes of the DBTs. The DBT technical basis document contains a basis for the specific adversary characteristics. These supplemental documents contain safeguards and classified information, and therefore, are withheld from public disclosure and only distributed on a need-to-know basis to persons with authorized access. ~~The NRC's DBT is not based on worst-case scenarios but rather on actual adversary characteristics demonstrated worldwide and a determination as to those characteristics against which a private security force could reasonably be expected to provide protection.~~

The April 29, 2003, DBT orders required nuclear power reactors and Category I fuel cycle licensees to revise their physical security plans, security personnel training and qualification plans, and safeguards contingency plans to defend against the supplemental DBT requirements. The orders resulted in licensee security enhancements such as increased patrols; augmented security forces and capabilities; additional security posts; additional physical barriers; vehicle checks at greater standoff distances; better coordination with law enforcement and military authorities; augmented security and emergency response training, equipment, and communication; and more restrictive site access controls for personnel, including expanded, expedited, and more thorough worker initial and follow-on screening. Currently, all power

reactor and Category I fuel facilities have received NRC approval of security plans consistent with the DBTs imposed by the April 2003 orders.

#### (b) Objective of Proposed Rulemaking

~~The proposed rulemaking would consolidate the supplemental requirements put in place by the orders and the existing DBT requirements in § 73.1(a).~~ The proposed rulemaking would make generically applicable the security requirements previously imposed on existing licensees by the Commission's April 2003 DBT orders, and redefine in NRC regulations the level of security necessary to ensure adequate protection of the public health and safety and common defense and security. The proposed rule would describe the DBTs at a level of detail comparable to the current rule. Specific details related to the threat, which include both safeguards information and classified information, would be consolidated in adversary characteristics documents that would include requirements consistent with those in the DBT orders. The adversary characteristics documents would be available to those with a need to know and authorized access. The proposed rulemaking would include the DBTs for both radiological sabotage (applied to power reactors and Category 1 fuel cycle facilities) and theft and diversion (Category 1 fuel cycle facilities). The proposed rulemaking would also consider the petition for rulemaking filed by the Committee to Bridge the Gap (PRM-73-12).

#### (c) Backfit Rule Concerns

This section should be replaced with revised discussion from FRN.

[This proposed regulatory action would not involve the imposition of any new requirements. The approach selected for the proposed rule would not expand the DBTs beyond requirements currently in place under existing NRC regulations and orders. Consequently, the proposed § 73.1(a) amendments would not require existing licensees to make additional changes to their current NRC-approved security plans. As such, there would be no backfits involved with this regulatory action.]

## II. Analysis of Alternatives

There are basically two alternatives for addressing changes to the DBT requirements. Those alternatives are to take no additional regulatory action beyond the DBT orders (No Action Alternative) and rulemaking (of which there are three variations). These alternatives are discussed below in more detail.

#### (a) No Action Alternative

This alternative is simply to take no additional regulatory action and, as a result, not revise the governing regulations in § 73.1(a) pertaining to DBT. This approach would continue the status quo, which is implementation of supplemented DBT requirements as imposed through the DBT orders. While this action would save the agency resources that it would expend revising the regulation, it would leave § 73.1(a) as is, and these requirements do not reflect the supplemented DBT requirements currently in place. As such, the regulations would not be up-to-date; this situation could introduce inefficiencies into the regulatory process. This alternative was not chosen since it is important to consolidate the DBT requirements and revise § 73.1(a) accordingly.

## (b) Rulemaking Alternatives

The second alternative is to revise § 73.1(a) DBT requirements. There are several different strategies for revising the requirements in the regulations. The strategies are:

(1) A rulemaking would contain the DBT details (which are safeguards and classified information) but which would withhold this information from public disclosure. This would require a change to Part 2 to develop a new rulemaking process.

(2) A rulemaking that would remove all detail from the regulation and reference documents that contain the DBT details.

(3) A rulemaking that would revise § 73.1(a) requirements to remove detail that might provide useful information to potential adversaries and follow an approach similar to the current regulation by not referencing a document containing DBT attributes, but keeping the level of detail in the rule language consistent with the current detail level in an effort to maximize the opportunity for meaningful stakeholder participation.

The first strategy would require a change in § 2.800 to develop the new rulemaking procedures that would account for the withholding of safeguards and classified information from the public. This approach envisions neither public notice of a rulemaking nor an opportunity for the public to comment on the proposed DBT regulation. This proposed rule could contain detailed DBT requirements (which are safeguards and classified information), but the DBT detail would be withheld from the public. Developing new rulemaking procedures would likely involve considerable resources and there is the potential that this process would not comply with the Administrative Procedure Act (APA). Given these challenges and the additional expenditure of staff resources to pursue this approach, this strategy was not chosen.

The second strategy would remove all DBT details from § 73.1(a) and reference documents containing the DBT requirements. This option would limit availability of information that could aid potential adversaries. However, removing all the DBT details to a document that would be restricted from public access (due to the safeguards and classified content), would create questions regarding whether the approach provides the public with a meaningful opportunity to comment. For this reason, this approach was not selected.

The third strategy would revise the § 73.1(a) requirements to accurately reflect the new DBT requirements except for information that could be useful to potential adversaries, while removing information that is outdated. This strategy would not reference a document within the regulations, and in this sense, this strategy is similar to current regulatory practice (i.e., § 73.1 has been structured this way since its inception). This approach was used when the DBT requirements were last revised to incorporate new vehicle bomb requirements with one important exception. This approach would maintain a level of detail in the rule text that is comparable to the current § 73.1 level of detail in an effort to maximize the opportunity for external stakeholders to participate in the rulemaking. Compared to the other rulemaking strategies described above, this rulemaking strategy would provide the public with the greatest opportunity to comment and participate in the rulemaking process. However, the public's participation and access to safeguards and classified information is restricted to members of the public who have a need to know and authorized access. This is the rulemaking strategy that is judged as being the best option that balances public participation with the need to protect

### (c) Conclusion Regarding Alternative Strategies

Based on the reasons discussed above, the NRC concludes that a rulemaking approach described in the third strategy is the best approach.

### III. Estimate and Evaluation of Values and Impacts

#### (a) Overview

This section should be revised consistent with the FRN.

[This rulemaking would revise the governing regulations pertaining to the DBTs to more closely align the regulation with the actual requirements that were implemented by the April 29, 2003 DBT orders. This rulemaking would not impose any new requirements beyond those which have already been imposed through orders. A Petition for Rulemaking (PRM-73-12) is being considered as part of this rulemaking with the intention of determining whether DBT requirements need to be strengthened as the petitioner requests. The NRC is granting PRM-73-12 in part, and denying PRM in part (refer to Section V of the proposed rule notice). As a result of the DBT orders, licensees revised their security plans and submitted them for staff review and approval. The staff reviews were completed on October 29, 2004. Furthermore, this rulemaking would not impose any new information collection requirements.

This rulemaking would have no impact on plant risk. This rulemaking would not change the risk associated with security-related events from the current level because requirements that are currently in place per the orders, remain in place. Because there would be no net change in risk related to radiological sabotage or theft and diversion (the implemented orders have already addressed this), there would be no net change in potential value (in terms of reduced risk) due to this rulemaking.

There is value in pursuing this rulemaking, because revising § 73.1(a) requirements to more accurately reflect the implemented DBT requirements (with the constraint that certain information would not be revealed within § 73.1(a)), would further increase the regulatory coherency by updating the DBT requirements in § 73.1(a).]

#### (b) Impacts on Licensees

Impacts upon the licensees from this proposed rulemaking would be minimal. Because the adversary characteristics would remain consistent with those promulgated by orders, no technical changes will be required. Licensees may need to update references in their security plan documentation, which could be accomplished without NRC review and in conjunction with future plan updates.

#### (c) Impacts to the NRC

- a. The primary impact on the NRC would be the resources expended in conducting this rulemaking, including the consolidation of security guidance related to the DBT. This guidance was developed during the post September 11, 2001, time frame, and was used by licensees to revise security plans per the new DBT.

---

---

**Environmental Assessment Supporting Proposed  
Rule, 10 CFR Part 73.1- Design Basis Threat**

---

---

**U.S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation**

**June 2005**



UNITED STATES NUCLEAR REGULATORY COMMISSION  
ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is proposing to revise the requirements in 10 CFR 73.1. Specifically, the proposed rule would revise the design basis threat (DBT) requirements for both radiological sabotage, which are generally applied to power reactors and Category I fuel cycle facilities, and theft or diversion of NRC-licensed Strategic Special Nuclear Material (SSNM), which are generally applied to Category I fuel cycle facilities. Radiological sabotage specifically applies to facilities that use special nuclear material. However, current Category I facilities do not typically possess or use nuclear/radioactive materials that would constitute a radiological sabotage threat. Theft or diversion applies to facilities that receive, acquire, possess, use, or transfer formula quantities of SSNM. The DBTs are used by these licensees to form the basis for site-specific defensive strategies implemented through security plans, safeguards contingency plans, and guard training and qualification plans. The rulemaking also considered a petition for rulemaking filed by the Committee to Bridge the Gap on July 23, 2004, (PRM-73-12) that pertains to the DBT.

ENVIRONMENTAL ASSESSMENT

Identification of the Action:

~~The principal objective of the proposed revision to the § 73.1(a) DBT rule is to consolidate the supplemental requirements put in place by the April 29, 2003, DBT orders with the existing DBTs requirements in § 73.1(a).~~ The principal objective of the proposed rule is to make generically applicable the security requirements previously imposed by the Commission's



April 29, 2003 DBT orders, and to define in NRC regulations the level of security necessary to ensure adequate protection of the public health and safety and common defense and security.

The approach proposed in this rulemaking would maintain a level of specificity in § 73.1(a) rule language that is comparable to the current regulation, while revising DBT attributes to be consistent with the requirements imposed by the April 29, 2003, DBT orders. The revised approach would keep certain specific additional details, which are both safeguards and classified information, in separate, non-publicly-available adversary characteristics documents.

A Petition for Rulemaking, PRM-73-12, filed by the Committee to Bridge the Gap, was considered as part of this proposed rulemaking, would be dispositioned as described in the notice of proposed rulemaking. The petition requests that the NRC amend its regulations to upgrade the DBT regulations (in terms of numbers, teams, capabilities, planning, willingness to die and other characteristics of adversaries) to a level that encompasses, with a sufficient margin of safety, the terrorist capabilities demonstrated during the attacks of September 11, 2001. The petition also requests that security plans, systems, inspections, and force-on-force exercises be revised in accordance with the amended DBT. Finally, the petition requests that a provision be added to Part 73 to require licensees to construct shields against air attack (referred to as "beamhenge"), so that nuclear power plants would be able to withstand an air attack from a jumbo jet similar to the September 11, 2001 attacks. PRM-73-12 was published for public comment in the *Federal Register* on November 8, 2004 (69 FR 64690). The public comment period expired on January 24, 2005. There were 845 comments submitted on PRM-73-12, of which 528 were from letters. Many of the comments were submitted after the comment period expired, however the staff reviewed and considered all of the comments. Comments were received from nine state attorney generals, approximately 20 public interest groups, a U.S. Congressman from Massachusetts, and six industry groups and licensees. In


NOTATION VOTE  
RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER LYONS  
SUBJECT: **SECY-05-0106 - PROPOSED RULEMAKING TO  
REVISE 10 CFR 73.1, DESIGN BASIS THREAT  
(DBT) REQUIREMENTS**

Approved X Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS: *see attached*

  
\_\_\_\_\_  
SIGNATURE  
*7/27/05*  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes ✓ No \_\_\_\_\_

## Commissioner Lyons' comments on SECY-05-0106

### Proposed Rulemaking to Revise 10 CFR 73.1, Design Basis Threat (DBT) Requirements

I commend the staff's efforts to devise an approach for this rulemaking that provides adequate public notification and opportunity for meaningful public comment and to accurately convey that the proposed rule does not represent a reduction of the requirements already established by Order.

I approve the staff's recommendations with comments as follows:

1. The staff should not exempt ISFSI from being protected against waterborne threats where applicable (i.e., ISFSIs built close to waterways). The staff notes that a previous evaluation, pursuant to the requirements issued in the October 16, 2002 ISFSI orders, concluded that other means (requirements) in the orders were sufficiently protective for the waterborne threat. However, the proposed rule should be clear that ISFSIs must be protected against waterborne threats, if such threats are applicable due to the location of the ISFSI. Such protection might possibly be demonstrated through compliance with other provisions of the final rule, but demonstration should be required in any case.

2. The NRC press release should make clear that the Commission is partially granting the petition by considering most of the petitioner's issues during the rulemaking process, but that the portion of the petition requesting amendment of NRC regulations to add attacks by aircraft to the DBT was determined not to be required, since existing requirements ensure adequate protection of public health and safety. The Commission's decision was balanced and objective and should be conveyed as such.

3. Editorial comments to the FRN as follows:

(Pg 20) Second full paragraph, fourth sentence (beginning "The Department of Defense...") should be clarified as

"Such improvements have already been exercised effectively by the Department of Defense and the Federal Aviation Administration through responses to airspace violations near nuclear power plants that were subsequently determined not to be threats."

(Pg 21) Seventh line from the top, should be clarified as

"...studies confirm that the likelihood of an aircraft both damaging the reactor core and..."

(Pg 22) Section VI, Item 1., last line, should be clarified as

"...to-know basis to those ~~with~~ who otherwise qualify for access."

(Pg vii) Environmental Assessment and Finding of No Significant Impact, 12<sup>th</sup> line from the top, should be clarified as

"...nonradiological plant effluents, and would have no other environmental impact."

OL 7/27/05