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

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

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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 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.

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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 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

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 authorized access. This is the rulemaking strategy that is judged as being the best option that balances public participation with the need to protect safeguards and classified sensitive information. As such, this strategy would warrant the expenditure of agency resources; consequently, the NRC selected this approach.

(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.

- b. NRC would not need to expend resources to review and approve security plans as a result of the revised DBT because this effort has already occurred and was completed on October 29, 2004.
- c. There would be no additional resource impacts from adjusting inspection guidance or processes to take into account the existence of the new DBT requirements that have not already been incurred as a result of the April 29, 2003, DBT order implementation. The NRC uses force-on-force mock exercises as a primary means to judge the effectiveness of security plans. The force-on-force exercises were revised concurrent with the DBT order implementation effort, and as such, this impact is not part of this rulemaking.

(d) Impacts to Other Stakeholders

The NRC staff has not identified any impacts upon other stakeholders. Public health and safety would be assured through either the existing requirement implemented by orders or the revised requirements (which more closely align the governing regulations with the orders). There would be no new costs of implementation associated with the rulemaking.

(e) Values of the Proposed Rulemaking for NRC, Industry, and Other Stakeholders

The NRC staff has identified a value to stakeholders, that being the conduct of a proposed rulemaking that allows their participation in the process. In terms of values measured by risk reductions, the requirements are not changing and as a result, this rulemaking would not impact the risk associated with security events.

IV. Decision Rationale for Selection of Proposed Action

This regulatory analysis is largely qualitative which is dictated by the nature of a proposed rulemaking that seeks to more closely align § 73.1(a) with the requirements already imposed through orders. The rulemaking would neither impose additional requirements nor would it require licensees to take action or respond to the revised requirements. As a result, the regulatory analysis presents a decision as to whether the NRC should expend its resources to revise § 73.1(a) requirements to more closely reflect the supplemental DBT requirements imposed by order. As previously discussed, the NRC has decided that the expenditure of its resources is warranted to accomplish this objective.

V. Implementation

NRC is proposing to revise § 73.1(a) to consolidate and more closely align NRC regulations with the supplemental DBT requirements required by orders dated April 29, 2003. The proposed rule would not impact licensees nor would the proposed rule require licensee responses, submittals, or affirmative actions. Review guidance was developed during the order implementation period; this rulemaking would not change that guidance, but would consolidate it where appropriate. The proposed rule will be publicly noticed and will provide for a public comment period to be followed by publication of a final rule approximately one year after publication of the proposed rule. No impediments to implementation of the recommended alternative have been identified.