GRACE
GLOBAL RESOURCE ACTION CENTER FOR THE ENVIRONMENT

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January 18, 2006

Secretary
United States Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTN: Rulemakings and Adjudications Staff.

Re: PRM-73-12: Petition by Committee to Bridge the Gap to amend NRC regulations to upgrade the design basis threat regulations

Proposed Rule 10 CFR §73 Design Basis Threat

The following are the comments of GRACE (the Global Resource Action Center for the Environment) a New York based nonprofit organization that works with research, policy and grassroots communities to raise public awareness and promote solutions to preserve the planet for future generations. GRACE is involved in nuclear security issues on a regional, national and international level.

In sum, we are supportive of the amendments proposed by the Petitioner the Committee to Bridge the GAP and strongly urge the NRC to adopt them as soon as practical. However, it is also our belief that new NRC security regulations must give particular attention to enhancing security at facilities located on navigable waterways and that the NRC must require physical barriers to protect facilities from water born attacks.

Background: It is important to note that the Nuclear Regulatory Commission (NRC) was established by the U.S. Congress under the Energy Reorganization Act of 1974 to ensure adequate protection of the public health and safety and the environment in the use of nuclear materials in the United States. This reorganization occurred because it was seen as a problematic dual role to promote nuclear power and safeguard against its inherent dangers. However, we believe that since September 11th the NRC has attempted to minimize safety concerns and has failed to aggressively lead an effort to safeguard our nation from the horrific possibilities of a successful terrorist attack on a reactor. The NRC is still operating with a pre-9/11 mentality that unimaginable attacks are not likely, when experience has clearly taught us otherwise.

As identified in the report authored by The National Commission on Terrorist Attacks on the United States, the original al-Qaeda plan was to hijack ten domestic commercial aircraft and direct two of them into U.S. nuclear power stations. By September 11, 2001 the attack plan was scaled back to four hijacked aircraft which were involved in successful suicidal attacks from the air on the World Trade Center, the Pentagon and an aborted unknown third destination, possibly a nuclear reactor. Therefore, these are the levels of threats our nation must guard against.

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1) Design Basis Threat:

Specifically, we support the petitioners request that the NRC amend its regulations to upgrade the "design basis threat" (DBT) regulations and the associated requirements for protection of domestic reactors from nuclear terrorism. The NRC should require that protection levels match the sophisticated and coordinated capabilities evidenced by the attacks of September 11, 2001.

It is simply unconscionable that the current DBT regulations only require protection against three attackers on foot, acting as a single team, with weapons no greater than hand-carried automatic weapons, plus the possible assistance of one insider.

Although the NRC issued secret "Orders" in 2003 that marginally increased the DBT, these were negotiated with the industry without public comment or participation. Moreover, the Commission has conceded that the DBT in the Orders still does not approach 9/11 levels. Thus, we support the Petitioners request to rectify this deficiency by requiring protection against attackers in at least the numbers and with at least the capabilities seen on 9/11. To truly allow the DBT to accomplish this goal it must require **Visible** and **impenetrable** protection against attacks by air and water in particular.

a) Protection against air attacks: We support the enhanced protections proposed to guard against air attacks as well as the recommended construction of "Beamhenge" shields, constructed of steel I-beams, with cabling between them, at stand-off distances from sensitive reactor structures.

b) Spent fuel pools: We have particular concern about spent fuel pools and the possibility that a plane crash could result in a massive radioactive release. Indeed, the report "Safety and Security of Commercial Spent Nuclear Fuel Storage" from a committee of the National Academies' Board on Radioactive Waste Management[1] concludes that "spent fuel storage facilities cannot be dismissed as targets for such attacks because it is not possible to predict the behavior and motivations of terrorists, and because of the attractiveness of spent fuel as a terrorist target given the well known public dread of radiation...The committee judges that attacks by knowledgeable terrorists with access to appropriate technical means are possible."[2]

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[1] **Safety and Security of Commercial Spent Nuclear Fuel Storage: Public Report,** Committee on the Safety and Security of Commercial Spent Nuclear Fuel Storage, National Research Council

[2] Public Report p.4

Aircraft impact at a spent fuel pool, through a variety of mechanisms, could cause a loss of water from the pool. Moreover, a scenario involving the hijacking of a commercial aircraft may be less likely now than it was before 11 September 2001, because the airline industry is now aware of this threat. However, according to the physicist Richard Garwin, who has served on numerous US government panels, a scenario involving a rented or stolen cargo aircraft may be no less likely than before 11 September 2001.[3] The NRC must consider a scenario in which a licensed crew member of a passenger or cargo aircraft engages in a suicide attack. Therefore, once the NRC completes its plant-by-plant vulnerability analyses, it should guide the prioritization for the additional protective actions requested by this petition.

c) Enhanced protection against water borne attacks: Navigable water exclusion zones at reactors such as Indian Point, Millstone and Pilgrim are inadequate. An "exclusion zone" that is marked by buoys or floating "no-trespassing" signs is not impenetrable and is nothing more than a largely symbolic gesture. The NRC should require physical barriers that would prevent intrusion of a boat, scuba diver or floating explosive device anywhere near the reactor or intake canals. Moreover, there are readily deployable solutions available, for example the U.S. Army Corps of Engineers has installed barriers to protect dams and some version of this technology could be adapted for reactors.

2) Prioritized protection for reactors near dense population centers:

Reactors located near dense populations, pose a more likely target and pose more complicated emergency planning realities. Reactors near dense populations, such as Indian Point, north of New York City require specific attention because an attack would have unimaginable economic, social and political ramifications. These plants must be able to withstand massive military-style assaults by air, land and water.

3) NRC violating law, mission and responsibility:

This rulemaking violates the Administrative Procedures Act[4] and its Congressional intent to allow greater accessibility and participation by the public in the rulemaking process. By claiming to protect "safeguards information" and providing nothing but vague generalities this rulemaking makes meaningful and genuine public comment impossible. Given the longstanding public concerns regarding NRC and nuclear industry security cost containment strategies, the proposed rule is the dangerous product of behind-closed-doors. Moreover, it is a blatant refusal to adhere to Congressional orders that NRC include in any rulemaking consideration of September 11th-level threats, attacks by large groups, and attacks by air.

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[3] Richard Garwin, "The Many Threats of Terror", The New York Review, 1 November 2001, pp 16-18.
[4] 5 U.S.C. §§ 551-59, 701-06, 1305, 3105, 3344, 5372, 7521

Moreover, as a matter of public policy it is unwise and insulting to offers the public an opportunity to comment without specifics or basis. This type of action damages public confidence in NRC priorities and the current state of security levels existing at nuclear power stations.

4) Public Policy rationale: the threat of nuclear terrorism & the need to be proactive:

Immediately after the September 11 attacks, the NRC and the nuclear industry issued statements asserting that U.S. reactor containments were designed to withstand the crash of a fully loaded jumbo jet. Within days, both had to recant and admit that the opposite was the case. In fact, just hours after the terrorist attacks, NRC spokesperson Breck Henderson said U.S. nuclear plants were safe because "containment structures are designed to withstand the impact of a 747." Ten days later he admitted that "the initial cut we had on that was misleading." In a formal statement, the agency conceded that it "did not specifically contemplate attacks by aircraft such as Boeing 757s and 767s, and nuclear power plants were not designed to withstand such crashes."

Moreover, the magnitude of the issue cannot be understated. The combination of an immense amount of radioactivity coupled with the fact that the fuel must be constantly cooled to prevent it from melting and releasing that radioactivity, it is not difficult to understand why nuclear facilities might be a tempting target. The events of September 11 demonstrated the inadequacy of the agency's quarter-century-old security rules.

There were 19 terrorists on the planes and an unknown number of additional participants in the conspiracy. This number far exceeds the three external attackers the NRC postulates in present regulations. Moreover, the 9-11 attackers acted as four coordinated teams, while the present NRC rule requires the nuclear industry to guard against only a single team. In 1991, the instant Petitioner Committee to Bridge the Gap, formally petitioned the NRC to upgrade its regulations but were denied because "there has been no change in the domestic threat since the design basis threat was adopted that would justify a change." Today, it is abundantly clear that there has been a significant "changes in the domestic threat" and that NRC must act to address this.

Conclusion: It is far from unimaginable that a terrorist attack on a reactor, or a spent fuel pool in particular, would be a regional and national disaster of historic proportions, with health, environmental, economic, social and political dimensions. Therefore, we again respectfully urge the NRC to adopt the Petitioners recommendations and to take more aggressive, visible measures to protect reactors from possible attack.

Sincerely,

Scott M. Cullen, Esq.

Nuclear Security Project Director