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(58 FR 58804)

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NUCLEAR CONTROL
INSTITUTE

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January 3, 1994

Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

We are writing to express the views of the Nuclear Control Institute ("NCI") concerning proposed revision of the rules of the Nuclear Regulatory Commission (the "NRC" or the "Commission") governing protection against malevolent use of vehicles at nuclear power plants (10 CFR, Part 73), as published in the Federal Register on November 4, 1993 (58 Fed. Reg. 58804), and corrected on November 12, 1993 (58 Fed. Reg. 59965).

NCI is a non-profit corporation organized and existing under the laws of the District of Columbia. It monitors developments in nuclear commerce that increase the risks of nuclear proliferation and nuclear terrorism. In 1985, NCI co-sponsored a multidisciplinary, internationally attended conference on nuclear terrorism and thereafter created an International Task Force on the Prevention of Nuclear Terrorism, comprised of 26 experts from nine countries. These initiatives resulted in two books: Nuclear Terrorism: Defining the Threat (Leventhal and Alexander, eds., Pergamon, 1986) and Preventing Nuclear Terrorism (Leventhal and Alexander, eds., Lexington, 1987). Among other matters, the 150 participants in the conference and the 26 Task Force members identified deficiencies and urged improvements in protection against radiological sabotage at nuclear power plants and other nuclear facilities.

Since completion of its Task Force's work, NCI has collaborated with the Los Angeles-based Committee to Bridge the Gap (which is submitting separate comments) in pressing the NRC to upgrade its design basis threat for radiological sabotage and the implementing regulations. NCI's efforts have included letters to the NRC and National Security Council (1987), testimony before a House subcommittee (1988), and a Petition for Rulemaking (1991) and a Request for Action (1991) to the NRC. All these efforts proved unsuccessful. In 1993, prompted by the intrusion at the Three Mile Island nuclear power station and the bombing of the World Trade Center, NCI and the Committee to Bridge the Gap renewed their efforts to have the NRC upgrade security measures at domestic nuclear power plants. NCI testified before a Senate subcommittee (March 19), briefed the Commission (April 22), and served on a panel at the NRC-sponsored public meeting (May 10) on the design basis threat for radiological sabotage.

Given this long history, NCI is gratified that the NRC is proposing long-overdue measures to provide security against malevolent use of land vehicles at nuclear power

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Steps for stopping the spread and reversing the growth of nuclear arms.

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Carl S. Leventhal, President, Peter A. Bradford, David Cohen, Victor G. Ginsky, Denis A. Hayes, Julian Koenig, Sharon Tanzer, Roger Richter, Dr. Theodore B. Taylor

BOARD OF DIRECTORS

plants. The Commission is to be commended for taking this action. However, for the rule to be effective in preventing vehicle intrusions and protecting against the detonation of vehicle bombs that could cause major radiological releases at nuclear power plants, the Commission should eliminate some apparent oversights and ambiguities in the proposed rule.

In addition, the Commission will have to address other aspects of adversary attributes, including the insider threat, number of attackers, and weaponry and equipment used, if it wants to provide full protection against the threat of sabotage at nuclear power plants. Most of these are specified in the Phase II plan submitted by the Executive Director for Operations in his October 28 Memorandum for the Commission.

Licensee Discretion

In NCI's view the principal problem of the proposed rule is that it could be misread to allow licensees a greater degree of discretion than is warranted.

This is not true of all provisions of the proposed rule. For example, 73.55(c)(7) unconditionally stipulates: "Vehicle control measures, including barrier systems, must be established to protect against the use of a land vehicle, as specified by the Commission, as a means of transportation to gain unauthorized proximity to vital areas." In contrast to this unambiguous objective, Section (c)(8) allows "[e]ach licensee [to] compare the vehicle control measures established in accordance with 10 CFR 73.55(c)(7) to the Commission's design goals and criteria for protection against a land vehicle bomb." On the basis of this evaluation, the licensee may "[c]onfirm to the Commission that the vehicle control measures meet the design goals and criteria specified." If the licensee cannot make this confirmation, it can proceed in one of two ways, according to the explanatory section entitled "Regulatory Approach":

It may implement additional measures that would fully meet the design goals and criteria such as moving vehicle barriers further away from vital areas or equipment, installing blast shields, or modifying plant systems and equipment. Alternatively, the licensee may propose to the Commission additional measures other than the ones needed to fully meet the design goals and criteria, provided this approach provides substantial protection against a vehicle bomb and that it can be demonstrated that the costs of measures to fully meet the design goals and criteria are not justified by the added protection that would be provided. (Emphasis supplied.)

As NCI understands the procedure, the proposed rule requires at least four potential determinations to be made regarding the adequacy of licensee actions to provide protection against vehicle bombs:

1. Do the licensee's implemented vehicle denial measures, as required under

73.55(c)(7), by themselves provide a level of protection against land vehicle bombs that "fully meet[s] the design goals and criteria" of the Commission?

2. If not, do the licensee's "additional measures" provide a level of protection against land vehicle bombs that "fully meet[s] the design goals and criteria" of the Commission?

3. If not, will the licensee be permitted to provide a lesser level of protection? In other words, does the licensee satisfy the stipulated criterion, that "the costs of measures to fully meet the design goals and criteria are not justified by the added protection that would be provided"?

4. If so, do the licensee's "additional measures" nonetheless provide "substantial protection against a land vehicle bomb"?

It should be noted that implicit in determination No. 3 and No. 4 are definitions of two terms the Commission has not defined in the proposed rule: "substantial protection" and "unjustified costs."

In NCI's view, it is essential that the rule be made explicit in stating that the final determination in each of these four decisions, and any others involving an evaluation of the adequacy of protective measures at licensed facilities, rests with the Commission, not with the licensees. In the proposed rule, including the explanatory material in the Federal Register announcement, the language is ambiguous on this point. For example, in the "Description of Proposed Amendments," the announcement says,

Licensees whose vehicle denial measures do not fully satisfy the design goals for protection against a vehicle bomb would have the option to establish additional measures to meet the design goals or propose other additional measures that give substantial protection against a land vehicle bomb. (Emphasis supplied.)

This sentence easily could be misread to suggest that the ultimate decision on the nature and adequacy of the protective measures rests with the licensee. Similarly, under "Regulatory Approach," the announcement says,

The licensee would be required to determine if measures established to protect against vehicle proximity to vital areas of the facility also protect against the threat of a land vehicle bomb as defined by the design goals and criteria set by the Commission. (Emphasis supplied.)

Furthermore, under "Finding of No Significant Environmental Impact: Availability," one reads,

The proposed rule involves installation of vehicle barriers at

operating power reactor sites and an evaluation of these barriers by the licensee to determine whether they provide adequate protection against a land vehicle bomb under design goals and criteria established by the Commission. (Emphasis supplied.)

The "Implementation" section does state, "Proposals by licensees to use alternative measures would be handled as 10 CFR 50.90 amendments," apparently establishing the authority for final approval by the Commission in those cases. Yet the question of the Commission's authority to make final determinations remains ambiguous, at best, for those determinations that do not deal specifically with alternative measures, as in examples 1 and 2 above.

In short, the wording of the rule and its explanatory material should be clarified so as to make plain the Commission's authority to make each of the crucial determinations cited above, and to evaluate independently the analyses provided by the licensee. The rule explanatory material should be revised to correct these shortcomings, as described above, and the rule itself should be modified as follows:

At the end of 73.55(c)(7), insert the following: "These measures shall be reviewed by, and subject to the approval of, the Commission."

In 73.55(c)(8)(i), strike "Confirm to the Commission" and insert "Submit to the Commission a confirmation, subject to the approval of the Commission."

In 73.55(c)(8)(ii), second sentence, strike "an analysis" and insert "the Commission's analysis".

At the end of 73.55(c)(9)(i), strike the semicolon and insert a period. After the period, insert "The submittal shall be reviewed by, and subject to the approval of, the Commission:"

"Substantial Protection"

NCI strongly objects to provision 73.55(c)(8)(ii), which allows some licensees to comply only with the lesser standard of "substantial protection" against land vehicle bombs, rather than "fully meet[ing] the design goals and criteria." While NCI recognizes that the Commission is attempting to provide a degree of flexibility to licensees because of differences in the characteristics of protected areas among the affected sites, this flexibility should not compromise the level of protection at each licensed facility. Therefore, NCI proposes that the term "substantial protection" be replaced with "equivalent protection" or "a level of protection equivalent to that provided by the Commission's design goals and criteria."

Backfit Analysis

The "Backfit Analysis" of the Federal Register announcement states that "backfitting to comply with the requirements of this proposed rule will provide a substantial increase in protection to public health and safety or the common defense and security at a cost which is justified by the substantial increase." This language appears to be intended to track the slightly different language in the relevant section of the backfit rule (10 CFR 50.109(a)(i)(3)): "...that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of implementation...are justified in view of this increased protection." Unless the Commission intends to make a distinction from the backfit rule, the language of the proposed rule should be identical. If a distinction is intended, the Commission should state its reasons for the distinction and submit them for public comment.

Hand-Carried Weapons, Equipment and Explosives

A further problem with the proposed rule is that by finally upgrading the design basis threat for radiological sabotage to provide for malevolent use of vehicles at nuclear power plants, it creates inconsistencies with other elements of the design basis threat that are carried over into the proposed rule. In particular, the proposed rule continues to assume that intruders will bring only hand-held automatic weapons and hand-carried equipment and/or explosives (73.1(a)(1)(i)(C) and (D)). The assumption of hand-carried equipment and/or explosives also is included in the new paragraph (a)(1)(i)(E) specifying the design-basis vehicle.

NCI has previously stated its view that the assumption that intruders will have only hand-held weapons and hand-carried explosives is one of the deficiencies of the design basis threat for radiological sabotage. However, this provision at least had the virtue of being consistent with the flawed assumption that intruders would not use a vehicle. Now that the NRC is acknowledging the possibility that a vehicle will be used, it stands to reason that the intruder will be able to use the vehicle to carry heavier, more powerful weapons, equipment and explosives. Indeed, by proposing in its regulatory approach that licensees "establish measures to protect vital equipment within power reactor vital areas from...damage from the detonation of a vehicle bomb in the vicinity of the vital area" (emphasis supplied), the Commission is acknowledging the use of a greater quantity of explosives than can be carried by hand. By the same reasoning, it also can be assumed that the vehicle can be used to carry heavier weapons and equipment than can be carried by hand.

NCI proposes, therefore, that in 73.1, the new paragraph (a)(1)(i)(E) be amended to read as follows: "A four-wheel drive land vehicle used as a vehicle bomb or for the transport of personnel, weapons, equipment, and/or explosives, and". In addition, we propose that as part of Phase II of the Commission's review of the design basis threat for radiological sabotage, in which adversary attributes for weaponry, equipment, and group size are to be addressed, that paragraphs (a)(1)(i)(C) and (D) be modified to provide

specifically for weapons, equipment and explosives that could be transported by vehicle and, therefore, would be heavier and more powerful than those that are hand-held and hand-carried.

However, NCI wishes to emphasize that even if one accepts the present assumption that the adversary will use only hand-held weapons, there is still a major defect in the proposed rule and in the guidance issued by the Commission for its implementation (NUREG-CR-4250). Neither the proposed rule nor the guidance assumes that the adversary can blast away the protective fence. Yet, shoulder-fired weapons such as a bazooka or a more modern laser-guided ("LAW") grenade launcher could easily blast a large opening in a fence reinforced with aircraft cable and enable an explosives-laden land vehicle to pass through and gain sufficient proximity to vital areas of a plant to cause severe damage and radiological releases. Thus, the type of barrier to be required by the proposed rule to repel a design-basis land vehicle will be insufficient to withstand a design-basis, hand-held weapon.

It might be argued that there never has been a land vehicle bomb attack in conjunction with the use of a bazooka or similar type of weapon to blast through a barrier prior to detonation and that, therefore, such a contingency need not be addressed in the design-basis threat for radiological sabotage. NCI contends, however, that in most cases, such as the truck-bomb attacks on the U.S. Embassy and the U.S. Marine barracks in Lebanon and the World Trade Center in New York, there were no obstacles that needed to be blasted away for the truck to get close enough to cause severe damage. Also, the large radiological releases that could be caused by detonation of a truck bomb in close proximity to the vital areas of a nuclear power plant make it imperative that such an obvious vulnerability of the protected-area fence be foreclosed.

The Commission, therefore, should revise the proposed rule and the guidance for its implementation to require licensees to take compensatory measures in the form of heavy-mass protective systems, such as the installation of steep, S-curve ditches or steep, wide berms (e.g. 5 feet high by 10 feet wide) around the protected-area fence. Such heavy-mass barriers would prevent a four-wheel drive land vehicle from penetrating the fence after a section of it is blasted away; without such barriers, the protected-area fence easily could be compromised with shoulder-fired weapons.

Timing

NCI supports the 90-day time frame for licensees' submittal of the summary description of their proposed vehicle control measures under the proposed 73.55(c)(9)(i). However, the Commission should express a firm commitment to conduct a prompt review of this submittal.

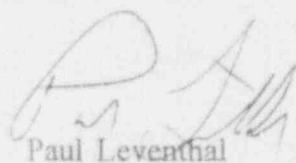
Under 73.55(c)(9)(ii), a licensee would have 360 days from the effective date of the final rule to bring its facility into compliance with the rule. NCI believes that 360 days is a reasonable time period in which to achieve compliance. However, the rule should stipulate

that there will be no extension of that deadline, absent a finding of due diligence and circumstances beyond the licensee's control.

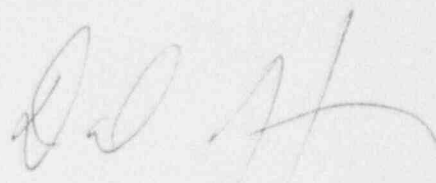
Finally, the Commission should establish procedures for monitoring licensees' compliance with the rule to ensure that the stipulated measures are, in fact, implemented within 360 days of the rule's effective date. The process of upgrading security to protect against truck bombs at nuclear power plants has been beset by numerous impediments and delays. Given the wake-up calls at Three Mile Island and the World Trade Center, the NRC and the public can ill afford any further delays.

Thank you for this opportunity to comment on the proposed rule. Please do not hesitate to contact us if you have any questions about the views expressed herein or if you require any further information concerning our position.

Sincerely,



Paul Leventhal
President



Daniel Horner
Deputy Director