



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

AD30-1

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SEP 6 1991

MEMORANDUM FOR: James M. Taylor
Executive Director for Operations

FROM: Eric S. Beckjord, Director
Office of Nuclear Regulatory Research

SUBJECT: COMMISSION PAPER ON PROPOSED AMENDMENTS TO 10 CFR PART 73,
TO ESTABLISH CRITERIA FOR PHYSICAL FITNESS TRAINING AND
ANNUAL PERFORMANCE TESTING, AND UPDATED DAY FIRING
QUALIFICATIONS FOR TACTICAL RESPONSE TEAM MEMBERS, ARMED
RESPONSE PERSONNEL, AND GUARDS AT FUEL CYCLE FACILITIES
POSSESSING FORMULA QUANTITIES OF STRATEGIC SPECIAL NUCLEAR
MATERIAL

The subject proposed package is enclosed for your action (WITS No. 8900065).

The Commission paper, as enclosed, has been reviewed, and appropriate concurrences have been obtained from the Offices of the Administration and Nuclear Material Safety and Safeguards. The Office of the General Counsel has no legal objections. The office of the Controller has reviewed the resource issues discussed in this paper.

A handwritten signature in black ink, appearing to read "Eric S. Beckjord".

Eric S. Beckjord, Director
Office of Nuclear Regulatory Research

Enclosure: Commission Paper

SEP 6 1991

MEMORANDUM FOR: James M. Taylor
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ORIGINAL SIGNED BY

Eric S. Beckjord, Director
 Office of Nuclear Regulatory Research

Enclosure: Commission Paper

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For: The Commissioners

From: James M. Taylor, Executive Director for Operations

Subject: PROPOSED AMENDMENTS TO 10 CFR PART 73, TO ESTABLISH CRITERIA FOR PHYSICAL FITNESS TRAINING AND ANNUAL PERFORMANCE TESTING, AND UPDATED DAY FIRING QUALIFICATIONS FOR TACTICAL RESPONSE TEAM MEMBERS, ARMED RESPONSE PERSONNEL, AND GUARDS AT FUEL CYCLE FACILITIES POSSESSING FORMULA QUANTITIES OF STRATEGIC SPECIAL NUCLEAR MATERIAL

Purpose: To obtain Commission approval to publish a notice of proposed rulemaking.

Issue: Whether the safeguards requirements set forth in Enclosure A should be imposed on NRC licensees who possess formula quantities of strategic special nuclear material (referred to as Category I) to ensure that facility Tactical Response Team members, armed response personnel, and guards are physically fit to perform their assigned duties, and that the day firing qualifications for those personnel are consistent with night firing qualifications.

Summary: This proposed amendment to the safeguards requirements in 10 CFR Part 73 is designed to correct two shortcomings. First, the staff has determined that certain classes of security force personnel may not be physically fit enough to perform their response duties effectively. The staff has concluded that a lack of specific physical training and

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performance testing criteria has led to this situation. Hence, this proposed amendment provides the criteria to be used for physical fitness training and performance testing. Second, the day firing course currently required in Part 73 for qualifying and requalifying security force personnel for use of their assigned weapons lacks the specificity and proficiency of that required for night firing.

Background:

On November 10, 1988, the NRC published amendments to 10 CFR Part 73 (53 FR 45447) that required fuel cycle licensees who possess formula quantities of strategic special nuclear material to establish and train, through periodic tactical exercises, Tactical Response Teams¹ (TRT) and to make available a force of guards² or armed response personnel³ to provide additional support to the TRT. TRT members, armed response personnel, and guards were also required to qualify annually for night firing with all assigned weapons.

At that time, no need for specific performance testing criteria was identified. However, as a result of NRC observations of licensee guard performance during a 1988 DOE Central Training Academy course, the NRC staff has concluded that criteria for physical performance testing of TRT members, armed response personnel, and guards and the specification of a minimum ongoing physical fitness training program are needed to assure the required level of fitness. The proposed rule will also amend the current day firing qualifications so that they will reflect the same degree of specificity and proficiency as the night firing requirements.

Discussion:

Current physical fitness qualification requirements for TRT members, armed response personnel, and guards are provided in Appendix B to 10 CFR Part 73 by a general performance statement which states that these individuals should have no physical weaknesses or abnormalities which would adversely impact the performance of assigned security duties. In addition, security force personnel are required to

¹"Tactical Response Team" means the primary response force for each shift which can be identified by a distinctive item of uniform, armed with specified weapons, and whose other duties permit immediate response.

²"Guard" means a uniformed individual armed with a firearm whose primary duty is the protection of special nuclear material against theft, the protection of a plant against radiological sabotage, or both.

³"Armed Response Personnel" means persons, not necessarily uniformed, whose primary duty in the event of attempted theft of special nuclear material or radiological sabotage shall be to respond, armed and equipped, to prevent or delay such actions.

demonstrate physical fitness for assigned duties by performing a practical physical exercise program within a specific time period and passing a qualifying medical examination by a licensed physician. Licensees describe their program in their guard qualification and training plan and NRC inspects for licensee compliance using the licensee's approved plan. However, the Commission's regulations do not contain any performance testing criteria.

In 1988, some NRC licensee guards participated in tactical exercises at the DOE Central Training Academy in Albuquerque, NM. The NRC observers noted that some of the NRC licensee guards were unable to participate in certain tactical exercises, apparently due to a lack of physical fitness. An examination of licensee exercise programs showed that they were probably inadequate to ensure the physical fitness level needed for strenuous tactical engagements. In order to assess the seriousness of this problem and to identify alternative corrective actions that were available, the staff undertook a more comprehensive analysis of security force personnel fitness at Category I licensee facilities.

The Department of Energy (DOE) owns and operates a number of facilities which also possess or use strategic special nuclear material. These facilities are protected by guard forces in much the same way as NRC's Category I licensee facilities. The safeguards risk of these NRC licensed facilities is the same as the safeguards risk at the DOE facilities. Therefore, an equivalent level of safeguards is appropriate. The staff examined the DOE physical fitness training program for applicability to NRC Category I licensees. As part of this examination, California State University at Hayward (CSUH) performed an analysis of security force personnel response duties and conducted health screening and fitness tests on licensee guards at Category I facilities. CSUH concluded⁴ that the duties for DOE response guards and NRC response guards (i.e., TRT members) are essentially equivalent. Additionally, CSUH noted that in an emergency situation, such as might be encountered by a TRT member, individuals need a cardiovascular reserve to perform effectively. However, CSUH found that of 66 subjects tested, 26 percent had a poor level of cardiovascular fitness and an additional 29 percent were below average. Further, high body fat levels were noted (e.g., 26 percent were classified as obese). Overall,

⁴ Arzino, P. A., et. al., Physical Fitness for Security Guard Personnel, California State University at Hayward, January 1990.

the CSUH test results indicated that a potentially significant number of guards may not have a sufficient cardiovascular reserve for a TRT response situation, particularly if they must exert themselves at a high intensity in order to reach the scene of an incident or their designated post during a critical situation. As a result, CSUH recommended that a physical fitness performance testing and training program is needed. The staff agrees with these conclusions.

The two issues germane to physical fitness performance criteria are: (1) whether there is a minimum level of physical fitness which response guards need to maintain in order to perform their required tasks; and, (2) if so, what is that minimum level of physical fitness. The DOE Physical Standards Validation Study⁵ concluded that such a level exists. The study also concluded that an individual who can perform a one-mile run in 8.5 minutes or less and a forty-yard dash in 8 seconds or less has attained the minimum level of physical fitness needed to perform the tasks required of response guards. No guard who was unable to meet these performance criteria was able to successfully complete the response guard tasks.

CSUH also analyzed the duties of NRC support guards, i.e., armed response personnel and other assigned guards, and concluded that those duties were equivalent to DOE support guard duties (security inspectors). The duties of these support personnel differ from the Tactical Response Team in that they are not assigned offensive combative duties such as pursuit or assault. The DOE Physical Standards Validation Study determined that an individual who can run one-half mile in 4 minutes and 40 seconds or less and a 40-yard dash in 8.5 seconds or less has attained the minimum level of physical fitness needed to perform the defensive combative tasks required of supporting security personnel. In 1986, these criteria became mandatory for certain DOE security inspectors, depending upon the nature of the response duties assigned (10 CFR 1046 Subpt. B, App. A(F)(1)).

In addition, CSUH examined DOE's medical screening guidelines and recommended that the medical criteria contained within Appendix B to Part 73 be amended to conform to the DOE requirements.

⁵Telfair, W. D., et. al., United States Department of Energy Physical Standards Validation Study, Professional Management Associates, Inc., September 30, 1982.

DOE's Medical Screening Guidelines, Physical Fitness Training Guidelines, and Physical Performance Validation Study, as well as CSUH's recommendation for a minimum ongoing physical fitness program for Category I licensees were submitted to three experts from the American College of Sports Medicine for their review. Two of these individuals were medical doctors and the third was an exercise physiologist. The following summarizes this review:

1. The training program, as described in DOE's Physical Fitness Training Guidelines, is adequate to ensure proper conditioning prior to taking the annual performance tests. However, requirements for strength and flexibility conditioning should be added to the training program for completeness.
2. While the reviewers believe that there were weaknesses in the DOE Validation Study (e.g., age and gender differences were not adequately addressed), they believed that the study adequately established the aerobic and anaerobic performance testing criteria.
3. The reviewers suggested that a medical doctor be relied upon to provide the medical clearance for participation in the proposed training and testing programs. Specific guidelines for medical screening should be available for the examining physician.

Accordingly, the staff decided to accept the recommendations of CSUH and the reviewers.

The staff has considered a number of regulatory approaches to implement the performance testing criteria and the continuing physical training programs. These include: (1) the issuance of an order, (2) the issuance of a regulatory guide further clarifying what is acceptable to the NRC for meeting the existing performance requirements for guards and armed response personnel, (3) the issuance of license conditions, or (4) promulgation of a regulation.

Current physical fitness testing and training requirements for armed security force personnel are codified in 10 CFR Part 73. The amendments proposed in this paper provide specific physical fitness performance testing criteria to be met to ensure that armed response personnel will be able to perform their response duties under conditions of strenuous tactical engagements. Therefore, modifications to the codified requirements of Part 73 should be imposed through formal rulemaking. Moreover, proceeding to impose performance testing criteria by rulemaking will better assure that all appropriate issues are raised prior

to the imposition of the criteria. The staff proposes to use the performance criteria developed in the DOE Physical Standards Validation Study, and specify a minimum physical fitness training program.

Currently, TRT members, armed response personnel, and guards are subject to the night firing course specified in Appendix H to 10 CFR Part 73 for qualification and annual requalification for use of assigned weapons. The staff believes that it is appropriate that the course required for day firing qualification for the same personnel be at the same level of specificity and proficiency as the existing night firing course. Although the proposed day firing criteria are more stringent than those which currently are specified in the regulations, each individual TRT member, armed response person, and guard is currently qualifying using both the night firing criteria of Part 73, and day firing criteria contained in the licensee's Weapons Qualification Plan that are very similar to the criteria being proposed. Based on this fact and the results of quarterly physical protection inspections of Tactical Response Teams for all assigned weapons, the staff believes that these individuals readily should be able to qualify using the proposed day firing criteria. Hence, the staff believes that these day firing criteria add no new burden. None the less, since there has been no direct licensee experience with these precise criteria, the staff proposes to explicitly solicit comment on their appropriateness.

The following summarizes the proposed amendments as set forth in Enclosure A:

Physical Fitness

The proposed amendments would provide specific criteria for annual performance testing of TRT members, armed response personnel, and guards at Category I facilities. To ensure the effectiveness of the program, a minimum physical fitness training program and the performance criteria are included in the proposed regulation. This program is derived from the DOE's program, augmented as recommended by the CSUH study and the reviewers as cited earlier, and would require licensees to assess the general physical fitness of all program participants every four months in order to determine the effectiveness of the program and to modify an individual's training regime, as necessary. The performance criteria for TRT members are a one-mile run in 8 minutes and 30 seconds or less and a 40-yard dash starting from a prone position in 8 seconds or less. For armed response personnel and guards the criteria are a one-half mile run in 8 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less.

Day Firing Qualifications

Day firing qualification criteria would be added to Appendix H of Part 73 and would be similar in format and content to the current Appendix H for night firing. The regulations would be amended to state that security force members must be prepared to demonstrate their qualification at any time upon request by an authorized representative of the NRC.

Coordination: Resources to implement this rulemaking are included in the draft FY 1992-1996 Five-Year Plan and no additional resources would be required for its implementation. The Office of the General Counsel has reviewed this paper and has no legal objections.

Recommendations: That the Commission:

1. Approve publication of the proposed amendments in the Federal Register with a 90-day public comment period.
2. Certify that the proposed amendments if adopted would not have a significant economic impact on a substantial number of small entities.
3. Note that:
 - a. A Draft Environmental Assessment stating that the proposed rulemaking will not have a significant environmental impact will be placed in the NRC Public Document Room (Enclosure B).
 - b. A Draft Regulatory Analysis will be placed in the NRC Public Document Room (Enclosure C).
 - c. The appropriate Congressional Committees will be informed of the Commission's action (Enclosure D).
 - d. A public announcement will be issued (Enclosure E).
 - e. The Federal Register Notice will be distributed by ADM to applicable licensees and other interested parties.
 - f. The Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification and the reason for it, as required by the Regulatory Flexibility Act.

- g. The proposed rule contains information collection requirements that are subject to review by OMB. Upon Commission affirmation, formal request for OMB review and clearance will be initiated.

James M. Taylor
Executive Director
for Operations

Enclosures:

- A. Federal Register Notice of Proposed Rulemaking
- B. Draft Environmental Assessment
- C. Draft Regulatory Analysis
- D. Draft Congressional Letter
- E. Draft Public Announcement



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

FORM 9 - 1004


Bill Morris
Robert M. Bernero
Jeffrey
Transmission
Site

MEMORANDUM FOR: C. J. Heltemes, Jr., Deputy Director
for Generic Issues and Rulemaking
Office of Nuclear Regulatory Research

FROM: Robert M. Bernero, Director
Office of Nuclear Material
Safety and Safeguards

SUBJECT: COMMISSION PAPER ON PROPOSED AMENDMENTS TO 10 CFR
PART 73, TO REQUIRE ANNUAL PHYSICAL FITNESS
PERFORMANCE TESTING AND UPDATED DAY FIRING
QUALIFICATIONS FOR TACTICAL RESPONSE TEAM
MEMBERS, ARMED RESPONSE PERSONNEL AND GUARDS
AT FUEL CYCLE FACILITIES POSSESSING FORMULA
QUANTITIES OF SPECIAL NUCLEAR MATERIAL

In response to your request of August 20, 1991, we have reviewed the subject proposed amendments and have forwarded some suggested editorial/clarification comments to your staff. We concur in the Commission paper.


Robert M. Bernero, Director
Office of Nuclear Material
Safety and Safeguards



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

AUG 29 1991

MEMORANDUM FOR: C. J. Heltemes, Jr., Deputy Director
for Generic Issues and Rulemaking
Office of Nuclear Regulatory Research

FROM: Patricia G. Norry, Director
Office of Administration

SUBJECT: OFFICE CONCURRENCE: PROPOSED RULE PACKAGE ON
PHYSICAL FITNESS PROGRAMS AND DAY FIRING
QUALIFICATIONS FOR SECURITY PERSONNEL AT
CATEGORY I FUEL CYCLE FACILITIES


The Office of Administration concurs on the proposed rule package that would require annual physical fitness performance testing for Tactical Response Team members, armed response personnel, and guards at Category I facilities and qualification and periodic requalification for use of their assigned weapons using updated criteria which are consistent with existing night firing criteria. We have enclosed a copy of the proposed rule package that presents editorial and format corrections.

We have added language to the summary statement so that it more clearly meets the requirements of the Office of the Federal Register (OFR) as set out in 1 CFR 18.12. In addition, we have made adjustments to the amendatory language and the presentation of the amendments that are necessary to comply with OFR publication requirements.

We have forwarded a copy of the proposed rule to the Information and Records Management Branch, IRM, for their comment and concurrence concerning the paperwork management aspects of this rulemaking action.

In order to assist you in preparing the list of documents centrally relevant to this proposed rule that is required by NRC's regulatory history procedures, you should place the designator "AD30-1" in the upper right-hand corner of each document concerning the rule that you forward to the Nuclear Document System.

If you have any questions concerning this review, please have a member of your staff contact Betty Golden (extension 24268) or Michael T. Lesar, Chief, Rules Review Section, Regulatory Publications Branch, ADM (extension 27758).


Patricia G. Norry, Director
Office of Administration

Enclosure:
As stated

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ENCLOSURE A
FEDERAL REGISTER NOTICE

[7590-01]

NUCLEAR REGULATORY COMMISSION

10 CFR PART 73

RIN:3150-AD30

Physical Fitness Programs and Day Firing Qualifications
For Security Personnel at Category I Licensee Fuel Cycle Facilities

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend security personnel performance regulations for fuel cycle facilities possessing formula quantities of strategic special nuclear material, (Category I licensees).

Certain security personnel at these facilities would be required to participate in a continuing physical fitness program and pass according to new criteria an annual performance test. In addition, these individuals would be required to qualify and annually requalify according to new criteria for day firing using their assigned weapons. This action is necessary to ensure that security personnel are able to perform their assigned duties under conditions of strenuous tactical engagements.

DATES: The comment period expires on (Insert a date 90 days from publication). Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given unless comments are received on or before this date.

ADDRESSES: Mail written comments to: The Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch. Comments may also be delivered to 11555 Rockville Pike, Rockville, MD, between 7:30 a.m. and 4:15 p.m on Federal workdays. Copies of the environmental assessment and finding of no significant impact and any comments received will be available for examination and copying at the NRC Public Document Room at 2120 L Street, NW. (Lower Level), Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. Harry Tovmassian, Division of Regulatory Applications, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-3634; or Ms. Carrie Brown, Division of Safeguards and Transportation, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-0382.

SUPPLEMENTARY INFORMATION:

BACKGROUND

On November 10, 1988, the NRC published amendments to 10 CFR 73.46 which required fuel cycle licensees who possess formula quantities of strategic special nuclear material (Category I licensee) to establish and train Tactical Response Teams (TRT)¹, conduct periodic tactical

¹"Tactical Response Team" means the primary response force for each shift which can be identified by a distinctive item of uniform, armed with specified weapons, and whose other duties permit immediate response.

exercises, and make available a force of guards² or armed response personnel³ to provide assistance to the TRT, as necessary. These amendments also required that TRT members, armed response personnel, and guards qualify and annually requalify for night firing with assigned weapons by meeting new minimum qualification criteria specified in Appendix H to 10 CFR Part 73. At that time, no need for specific performance testing criteria was identified.

As a result of NRC observations of licensee guard performance during a 1988 DOE Central Training Academy course, the NRC requested California State University at Hayward (CSUH) to examine the physical fitness levels of security force personnel of licensees who possess formula quantities of strategic special nuclear material. In the subsequent study, CSUH noted that in an emergency situation, that may be encountered by a TRT member, individuals need a cardiovascular reserve to perform effectively. However, CSUH found that of 66 subjects tested, 26 percent had a poor level of cardiovascular fitness and an additional 29 percent were below average. Further, high body fat levels were noted (e.g., 26 percent were classified as obese). Overall, the CSUH test results indicated that a potentially significant number of guards may not have a sufficient cardiovascular reserve for a TRT response situation, particularly if they must exert themselves at a high intensity in order

²"Guard" means a uniformed individual armed with a firearm whose primary duty is the protection of special nuclear material against theft, the protection of a plant against radiological sabotage, or both.

³"Armed Response Personnel" means persons, not necessarily uniformed, whose primary duty in the event of attempted theft of special nuclear material or radiological sabotage shall be to respond, armed and equipped, to prevent or delay such actions.

to reach the scene of an incident or their designated post during a critical situation. Therefore, the Commission has concluded that criteria for physical performance testing of TRT members, armed response personnel, and guards and the specification of a minimum ongoing physical fitness training program are needed to assure the required level of fitness. Accordingly, the NRC is proposing additional requirements relative to the physical fitness qualifications.

Under these proposed regulations TRT members, armed response personnel, and guards would be required to participate in annual physical fitness performance testing. Individuals would be required to be certified as medically fit by a licensed physician prior to participation in the performance tests or in the training program designed to ensure that the individuals achieve and maintain the required fitness level. In addition, licensees will be required to assess the general fitness of each participant every four months and to make modifications to the individual's training regime, as necessary.

The minimum physical fitness training program needed to achieve the necessary fitness levels has been separated into two elements. The first element includes the training of individuals through cardiovascular training activities such as running, bicycling, rowing, swimming, or cross-country skiing. The individuals will be tested prior to assignment as a TKT member and each year thereafter using the performance criteria of a one-mile run in 8.5 minutes or less and a 40-yard dash starting from a prone position in 8.0 seconds or less. Likewise, armed response personnel and guards will be required to participate in the physical fitness training program. However, the performance criteria for these

individuals will be a 1/2 mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less. The former criteria have been validated to test the fitness levels required of individuals whose duties are to perform offensive combative tasks, such as those required of TRT members. The latter criteria have been validated to test the fitness levels required of individuals whose duties are to perform defensive combative tasks, such as armed response personnel and support guards⁴.

The second element of the physical fitness training program involves musculoskeletal training (i.e., exercises which develop strength, flexibility, and endurance in the major muscle group). Although musculoskeletal training will be an integral part of the physical fitness training program, performance criteria have not been specified because to date there have been no validated studies which establish the levels of strength, flexibility, and endurance required of TRT members, armed response personnel, and guards under conditions of strenuous tactical engagement. However, the effectiveness of the musculoskeletal training will be included in the licensee's assessment program and the results will be used to make appropriate modifications to each individual's training regime.

Two documents have been prepared which may be used by licensees in developing physical fitness training programs and by physicians responsible for the required medical examinations of personnel participating in the programs. The first, "Physical Fitness Training

⁴ Telfair, W. D., et. al., United States Department of Energy Physical Standards Validation Study, Professional Management Associates, Inc., September 30, 1982.

Reference Manual for Security Force Personnel at Fuel Cycle Facilities Possessing Formula Quantities of Strategic Special Nuclear Material," NUREG/CR-5690⁵, provides information on designing and conducting a physical fitness training program. The second, "Medical Screening Reference Manual for Security Personnel at Category I Fuel Cycle Facilities Possessing Formula Quantities of Strategic Special Nuclear Material," NUREG/CR-5689, is intended for use by the examining physicians. These documents have been placed in the Public Document Room and are available for public inspection and copying.

In addition to proposing additional requirements for physical fitness, the NRC is also proposing to amend its day firing qualification criteria to make them consistent as to level of specificity and proficiency with the night firing requirements published in 1988. Although the proposed day firing criteria are more stringent than those which currently are specified in the regulations, each individual TRT member, armed response person, and guard is currently qualifying using both the night firing criteria contained in 10 CFR Part 73 and day firing criteria contained in the licensee's Weapon Qualification Plan that are very similar to the criteria being proposed. Based on this fact and the results of quarterly physical protection inspections of Tactical Response Teams for all assigned weapons, the staff believes that these individuals readily should be able to qualify using the proposed day firing criteria.

⁵Copies of NUREGs may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. Copies are also available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. A copy is also available for inspection or copying at the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.

Hence, the staff believes that these day firing criteria add no new burden. None the less, since there has been no direct licensee experience with these precise criteria, the NRC is requesting comment on their appropriateness.

Finding of no Significant Environmental Impact: Availability

* The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and therefore an Environmental Impact Statement is not required. The proposed amendments will affect neither the safety of the operations carried out by licensees possessing formula quantities of strategic special nuclear material nor the routine release of, or exposures to, radioactivity. The amendments would: (1) specify annual performance testing criteria and a minimum physical fitness training program, and ensure that security force personnel can adequately perform their duties under conditions of strenuous tactical engagement; and (2) provide the same level of specificity and proficiency in the day firing weapons qualification criteria that is now present in the night firing criteria.

The environmental assessment and finding of no significant impact on which this determination is based is available for inspection at the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC. Single copies of the environmental assessment and finding of no

significant impact are available from Mr. Harry Tovmassian, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, (301) 492-3634.

PAPERWORK REDUCTION ACT STATEMENT

This proposed rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). The recordkeeping and reporting requirements in this rulemaking have been submitted to the Office of Management and Budget for review and approval of the information collection and recordkeeping requirements.

Public reporting burden for this collection of information is estimated to average 36 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (MNBB-7714), U.S. Nuclear Regulatory Commission, Washington, DC 20555; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-3019, (3150-0002), Office of Management and Budget, Washington, DC 20503.

REGULATORY ANALYSIS

The Commission has prepared a draft regulatory analysis on this proposed amendment. The analysis examines the costs and benefits of the alternatives considered by the Commission. The draft analysis is available for inspection in the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC. Single copies of the analysis may be obtained from Ms. Carrie Brown, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, (301) 492-0382.

Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that this rulemaking will not have a significant economic impact upon a substantial number of small entities. The proposed rule would affect two licensees who operate fuel facilities possessing formula quantities of strategic special nuclear material licensed in accordance with 10 CFR Parts 70 and 73. The companies that own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the Small Business Standards set out in regulations issued by the Small Business Administration in 13 CFR Part 121. Furthermore, if a small entity were to apply for a license to possess formula quantities of strategic special nuclear material pursuant to 10 CFR Parts 70 and 73, the proposed rule by itself would not have a significant economic impact on their operations

because the economic impact would be dominated by the existing requirements for physical security and nuclear material control and accounting. Thus, this rule does not fall within the purview of the act.

Backfit Analysis

The NRC has determined that the backfit rule, 10 CFR 50.109, does not apply to this proposed rule and, therefore, a backfit analysis is not required for this proposed rule, since these amendments do not involve any provisions which would impose backfits as defined in 10 CFR 50.109 (a)(1).

List of Subjects in 10 CFR Part 73

Part 73 - Criminal Penalty, Hazardous materials-transportation, Incorporation by reference, Nuclear materials, Nuclear power plants and reactors, Penalty, 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.

PART 73--PHYSICAL PROTECTION OF PLANTS AND MATERIALS

1. The authority citation for 10 CFR Part 73 continues to read as follows:

AUTHORITY: Secs. 53, 161, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2201); sec. 201, as amended, 204, 88 Stat. 1242, as amended, 1245 (42 U.S.C. 5841, 5844).

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

For the purposes of sec. 223, 68 Stat. 958, as amended, (42 U.S.C. 2273); §§ 73.21, 73.37(g), and 73.55 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 73.20, 73.24, 73.25, 73.26, 73.27, 73.37, 73.40, 73.45, 73.46, 73.50, 73.55, and 73.67 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 73.20(c)(1), 73.24(b)(1), 73.26(b)(3), (h)(6), and (k)(4), 73.27(a) and (b), 73.37(f), 73.40(b) and (d), 73.46(g)(6) and (h)(2), 73.50(g)(2), (3(iii)(B), and (h), 73.55(h)(2) and (4)(iii)(B), 73.57, 73.70, 73.71, and 73.72 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

2. In § 73.46 paragraphs (b)(4), (b)(7), and (i) are revised and new paragraphs (b)(10) and (b)(11) are added to read as follows:

§ 73.46 Fixed site physical protection systems, subsystems, components, and procedures.

* * * * *

(b) * * *

(4) The licensee may not permit an individual to act as a Tactical Response Team member, armed response person, or guard unless the individual has been trained, equipped, and qualified to perform each assigned security duty in accordance with Appendix B of this part, "General Criteria for Security Personnel." In addition, Tactical Response Team members, armed response personnel, and guards shall be trained, equipped, and qualified in accordance with paragraphs (b)(6), (b)(7), (b)(10), and (b)(11) of this section. Upon the request of an authorized representative of the Commission, the licensee shall demonstrate the ability of the physical security personnel, whether licensee or contractor employees, to carry out their assigned duties and responsibilities. Each Tactical Response Team member, armed response person, and guard, whether a licensee or contractor employee, shall requalify in accordance with Appendix B of this part. Tactical Response Team members, armed response personnel, and guards shall also requalify in accordance with paragraph (b)(7) of this section at least every twelve (12) months. The licensee shall document the results of the qualification and requalification. The licensee shall retain the documentation of each qualification and requalification as a record for three years after each qualification and requalification.

* * * * *

(7) In addition to the weapons qualification and requalification criteria of Appendix B of this part, Tactical Response Team members, armed response personnel, and guards shall qualify and requalify, at least every twelve (12) months, for day and night firing with assigned weapons in accordance with Appendix H of this part. Tactical Response Team members, armed response personnel, and guards shall be permitted to practice fire prior to qualification and requalification but shall be given only one opportunity to fire for record. If a Tactical Response Team member, armed response person, or guard fails to qualify, the licensee shall remove the individual from security duties which require the use of firearms and retrain the individual. At least seven (7) calendar days must elapse before another attempt at qualification is permitted. Three consecutive failures to qualify or to requalify must result in permanent removal from security duties requiring the use of firearms.

(i) In addition, Tactical Response Team members, armed response personnel, and guards shall be prepared to demonstrate their day and night firing qualification with their assigned weapons at any time upon request by an authorized representative of the NRC.

(ii) The licensee or the licensee's agent shall document the results of weapons qualification and requalification for day and night firing. The licensee shall retain the documentation of each qualification and requalification as a record for 3 years after each qualification and requalification.

* * * * *

(10) In addition to the physical fitness qualifications of paragraph I.C of Appendix B of this part, each Tactical Response Team member, armed response person, and guard shall participate in a physical fitness training program on a continuing basis.

(i) The physical fitness training program must include, but not necessarily be limited to, the following:

(A) Training sessions performed at a frequency of at least three (3) times per week, on different days, preferably non-sequential.

(B) Training sessions of a duration of at least forty-five (45) minutes per session, including warm-up, cool-down, and stretching. The aerobic portion must be at least twenty (20) minutes in duration.

(C) Intensity of the aerobic portion of the training sessions must average between 60% and 90% of maximum heart rate.

(D) The elements of the exercise program must include activities that use large muscle groups, that can be maintained continuously, and that are rhythmical and aerobic in nature, e.g., running, bicycling, rowing, swimming, cross-country skiing, or other NRC-approved endurance activities.

(E) Musculoskeletal training exercises that develop strength, flexibility, and endurance in the major muscle groups, e.g., legs, arms, and shoulders, must be employed at least two days per week. Each major muscle group must be exercised with at least one set of 8-12 repetitions.

(F) The licensee shall assess Tactical Response Team members, armed response personnel, and guards for general fitness once every four months to determine the continued effectiveness of the ongoing physical fitness training program. Assessments must include a recent health

history, measures of cardiovascular fitness, percent of body fat, flexibility, muscular strength, and endurance. Individual exercise programs must be modified consistent with the needs of each participating Tactical Response Team member, armed response person, and guard and consistent with the environments in which they must be prepared to perform their duties.

(ii) Within thirty (30) days prior to participation in the physical fitness training program, the licensee shall give Tactical Response Team members, armed response personnel, and guards a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical fitness training program.

(iii) Licensees may temporarily waive an individual's participation in the physical fitness training program on the advice of the licensee's examining physician, during which time the individual may not be assigned duties as a Tactical Response Team member.

(11) In addition to the physical fitness demonstration contained in paragraph I.C of Appendix B of this part, Tactical Response Team members, armed response personnel, and guards shall meet or exceed qualification criteria as defined in paragraphs (b)(11)(i) through (b)(11)(v) of this section initially and at least every twelve (12) months thereafter.

(i) For Tactical Response Team members the criteria are a one-mile run in 8 minutes and 30 seconds or less, and a 40-yard dash starting from a prone position in 8 seconds or less. For armed response personnel and

guards that are not members of the Tactical Response Team the criteria are a one-half mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less. The test may be taken in ordinary athletic attire under the supervision of licensee designated personnel. The licensee shall retain a record of each individual's performance for three years.

(ii) Incumbent Tactical Response Team members, armed response personnel, and guards shall meet or exceed the qualification criteria within six (6) months of NRC approval of the licensee's revised Fixed Site Physical Protection Plan. New employees hired after the approval date shall meet or exceed the qualification criteria prior to assignment as a Tactical Response Team member, armed response person, or guard.

(iii) Within thirty days prior to participation in the physical performance testing, Tactical Response Team members, armed response personnel, and guards shall be given a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical performance testing. This requirement shall apply to initial and all subsequent physical performance testing.

(iv) The licensee shall place Tactical Response Team members, armed response persons, and guards who do not meet or exceed the qualification criteria in a monitored remedial physical fitness training program and relieve them of security duties which require the use of firearms. Individuals in the remedial physical fitness training program

shall have a maximum of three (3) months to satisfactorily meet or exceed the qualification criteria.

(v) Licensees may temporarily waive the annual qualification testing for an individual on the advice of the licensee's examining physician, during which time the individual shall not be assigned duties as a Tactical Response Team member.

* * * * *

(i) Implementation schedule for revisions to physical protection plans.

(1) By (Insert a date 90 days after the effective date of these amendments) each licensee shall submit a revised Fixed Site Physical Protection Plan to the NRC for approval. The revised plan must describe how the licensee will comply with the requirements of paragraphs (b)(7), (b)(10), and (b)(11) of this section. Revised plans must be mailed to the Director, Division of Safeguards and Transportation, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(2) Each licensee shall implement the approved plan relative to paragraphs (b)(7), (b)(10), and (b)(11) of this section within 180 days after NRC approval of the revised Fixed Site Physical Protection Plan.

3. Appendix H is revised to read as follows:

APPENDIX H - WEAPONS QUALIFICATION CRITERIA

The B-27 Target will be used for all weapon qualification testing

Table H-1 Minimum Day Firing Criteria¹
(see footnotes at end of Table H-1)

Weapon	Stage	String ²	Distance	Number of rounds	Timing ³	Position	Scoring
Handgun ⁴	1	1	3 yards	6	9 seconds	Draw and fire 2 rounds (repeat 2 times) 3 seconds each string	70% = qualified, maximum possible = 300 points, minimum required = 210 points
		2					
		3					
	2	1	7 yards	6	10 seconds	Draw and fire 2 rounds at center mass and 1 round at the head (repeat once) 5 seconds each string	
		2					
	3	1	7 yards	6	12 seconds (4 seconds each string)	Using weaker hand only, at the low ready position, fire 2 rounds (repeat twice)	
		2					
		3					
	4	1	10 yards	2	4 seconds	Draw and fire 2 rounds, come to low ready position	
			2				
		2	10 yards	2	3 seconds	Fire 2 rounds in low ready position and reholster	
3							
3		10 yards	4	12 seconds (revolver) 10 seconds (semi-automatic)	Draw and fire 2 rounds, reload with 6 rounds, fire 2 rounds and reholster		
		4					
4	10 yards	2	4 seconds	Draw and fire 2 rounds, come to low ready position			
	5						
5	1	15 yards	2	5 seconds	Standing, draw weapon, go to kneeling position, then fire 2 rounds and reholster		
		2					
2	15 yards	2	5 seconds	Standing, draw weapon, go to kneeling position, then fire 2 rounds and reholster			
					2		

Table H-1 Minimum Day Firing Criteria¹ - Continued
 (see footnotes at end of Table H-1)

Weapon	Stage	String ²	Distance	Number of rounds	Timing ³	Position	Scoring
Handgun ³ (Cont'd)	5	3	14 yards	4	14 seconds (revolver) 12 seconds (semi-automatic)	Standing, draw weapon, fire 2 rounds, reload with 6 rounds, move to kneeling position and fire 2 rounds, reload with 6 rounds and	70% = qualified, maximum possible = 300 points, minimum required = 210 points
		4	14 yards	2	5 seconds	Draw weapon and fire 2 rounds standing, come to low ready position and...	
		5	14 yards	2	3 seconds	Fire 2 rounds	
	6	1	25 yards	2	5 seconds	Draw and fire 2 rounds, standing, left side of barricade	
		2	25 yards	2	5 seconds	Draw and fire 2 rounds, right side of barricade (standing)	
		3	25 yards	4	15 seconds (revolver) 12 seconds (semi-automatic)	Draw weapon and from standing to kneeling position, fire 2 rounds, left side of barricade, reload with 6 rounds, and still in the kneeling position, fire 2 rounds right side of barricade	
		4	25 yards	2	10 seconds	Draw weapon and go from standing to prone, fire 2 rounds	
		5	25 yards	2	10 seconds	Draw weapon and go from standing to prone, fire 2 rounds	
	7	1	50 yards	2	8 seconds	Draw weapon and fire 2 rounds from a standing barricade position (right or left side, shooter's option)	
		2	50 yards	2	10 seconds	Draw weapon and fire 2 rounds from a kneeling barricade position (right or left side, shooter's option)	
		3	50 yards	2	12 seconds	Draw weapon and fire 2 rounds from prone position	

Table H-1 Minimum Day Firing Criteria¹ - Continued
(see footnotes at end of Table H-1)

Weapon	Stage	String ²	Distance	Number of rounds	Timing ³	Position	Scoring
Shotgun ²	1	1	7 yards	2 Double 00 buck-shot	4 seconds	At low ready position fire 2 rounds standing	70% = qualifies (Maximum=94, Minimum=65) (each pellet in black target area equals 1 point)
	2	1 2	15 yards	4 Double 00 buck-shot	15 seconds	At low ready position fire 2 rounds standing, reload and fire 2 rounds	
	3	1 2	25 yards	4 rifled slugs	20 seconds	On command, load 4 rifled slugs and fire 2 rounds standing and 2 rounds kneeling	(10, 9, 8, 7 points are available for each hit as indicated)
Rifle ²	1	1 2 3	15 yards	6	10 seconds (4 seconds for 1st string, 3 seconds for each of 2nd and 3rd string)	Standing in low ready position, to standing point shoulder (1 magazine loaded with 6 rounds, weapon in half-load configuration) safety on beginning of each string, fire 2 rounds per string	70% = qualifies (Maximum = 150 points, Minimum = 105 points, based on 5 point increments)
	2	1 2 3	25 yards	6	11 seconds (5 seconds for 1st string, 3 seconds for each of 2nd and 3rd string)	Standing in low ready position, to standing point shoulder (1 magazine loaded with 6 rounds, weapon in half-load configuration) safety on beginning of each string, fire 2 rounds per string	
	3	1 2 3	25 yards	6	17 seconds (7 seconds for 1st string, 5 seconds for each of 2nd and 3rd string)	Standing in low ready position, to kneeling point shoulder (1 magazine loaded with 6 rounds, weapon in half-load configuration) safety on beginning of each string, fire 2 rounds per string	

Table H-1 Minimum Day Firing Criteria¹ - Continued
(see footnotes at end of Table H-1)

Weapon	Stage	String ²	Distance	Number of rounds	Timing ³	Position	Scoring
Rifle ⁴ (Cont'd)	4	1 2	50 yards	4	16 seconds (9 seconds for 1st string, 7 second for 2nd string)	Standing in low ready position, to kneeling point shoulder (1 magazine loaded with 4 rounds, weapon in half-load configuration) safety on beginning of each string, fire 2 rounds per string	70% = qualifies (Maximum = 150 points, Minimum = 105 points, based on 5 point increments)
	5 ⁴	1	50 yards	4	20 seconds	Standing in low ready position, go to prone (weapon in half-load configuration) safety on with two magazines each loaded with 2 rounds, fire 2 rounds, eject first magazine, reload with 2nd magazine and fire 2 rounds	
	6 ⁴	1	100 yards	4	25 seconds	Standing in low ready position, go to prone (weapon in half-load configuration) safety on two magazines each loaded with 2 rounds, fire 2 rounds, eject first magazine, reload with 2nd magazine and fire 2 rounds	

Footnotes

1. This day firing qualifications course is to be used by all TRT members, armed response personnel, and guards.
2. A string is one of the different phases within a single stage.
3. Security force personnel will be timed as shown.
4. Stages 5 and 6 are only to be used for .30 caliber rifles.

Table H-2 Minimum Night Firing Criteria

Weapon	Stage	Distance	No. of Rounds	Timing	Position	Scoring	Lighting
Handgun (Rev.)	1	7 yds	12	45 seconds	Standing-no artificial support	Minimum qualifying = 70%	For all courses 0.2 foot-candles at center mass of target area
	2	15 yds	12	45 seconds			
Handgun (Semi-)	1	7 yds	2 + clip	30 seconds	Standing-no artificial support		
	2	15 yds	2 + clip	40 seconds			
Shotgun	1	25 yds	2 rifled slugs	30 seconds (Load 2 slugs - chamber empty - Time starts - Commence firing)	Standing-strong shoulder	Rifled slug hits = strike area on target (10, 9, 7)	
	1	15 yds	5 Double 00 buckshot	10 seconds (Load 5rds Buckshot - chamber empty - Time starts - Commence firing)	Standing-strong shoulder	Double 00 Buckshot: Hits in black= 2 pts (5rds x 9 pellets/rd x 2 pts=90) Minimum qualifying = 70%	
Rifle	1	25 yds	1-5rd mag.	45 sec.	Standing-Barricade	Minimum qualifying =70%	
	2	25 yds	1-5rd mag.	45 sec.	Standing		
	3	25 yds	1-5rd mag.	45 sec.	Kneeling		
	4	25 yds	1-5rd mag.	45 sec.	Prone		

Note: - All firing is to be done only at night. Use of night simulation equipment during daylight is not allowable. Use of site specific devices (i.e., laser, etc.) should be included in the licensee amended security plan for NRC approval.

Dated at Rockville, Maryland, this _____ day of _____, 1991.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,
Secretary of the Commission.

ENCLOSURE B
ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
For the Proposed Rule Amending 10 CFR 73 and Appendix H

Annual Physical Fitness Performance Testing and Day Firing
Qualifications for Tactical Response Team Members,
Armed Response Personnel, and Guards

I. Introduction

The Nuclear Regulatory Commission (NRC) is proposing to amend 10 CFR Part 73 which contains safeguards requirements affecting licensees authorized to possess formula quantities of Strategic Special Nuclear Material (SSNM). These amendments would provide criteria for physical performance training program for, and (2) criteria for annual physical performance testing of members of their Tactical Response Teams (TRT), armed response personnel, and guards. In addition, it proposes to augment the current Appendix H which specifies the night firing qualification criteria with qualification requirements for day firing of the same level of specificity and proficiency. These requirements have been proposed in order to ensure that guards at such facilities are physically fit to perform air duties under conditions of strenuous tactical engagement and are qualified to use their weapons.

II. Need for Action

Currently, NRC licensed fuel fabrication facilities possessing formula quantities of strategic special nuclear material are required to establish and train Tactical Response Teams and to make available a force of armed response personnel or guards to provide assistance in the event of a hostile engagement. The NRC has concluded that implementation of these requirements may not be completely effective from observing the performance of some licensee guards who participated in a Department of Energy (DOE) training exercise. After subsequent examination of the DOE guard training and testing program, the NRC has determined that specific criteria for the physical training and testing of TRT members, armed response personnel, and guards are needed.

The NRC is proposing to revise Appendix H of 10 CFR Part 73 to include day firing qualification criteria. This amendment would update the day firing qualification criteria for security force personnel and at the same time bring them to the same level of specificity and proficiency as those in use for night firing.

III. Environmental Impact of the Proposed Action

These amendments will affect neither the safety of operation nor the routine release of, or exposure to, radioactivity from the fuel facilities possessing formula quantities of SSNM.

The following two amendments are proposed: (1) annual physical fitness performance testing and (2) day firing qualification criteria for security force personnel using all assigned weapons. Neither of these measures has any identifiable environmental impacts.

IV. Alternative to the Proposed Action.

Section 102(2)(E) of NEPA provides that agencies of the Federal Government shall "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." The objective of these amendments is to provide greater assurance that the security personnel capabilities at fuel facilities possessing formula quantities of SSNM are maintained at a level commensurate with their responsibilities.

Two alternatives to the proposed amendments were examined. The first was to take no action and leave the physical fitness of TRT members, armed response personnel, and guards to the licensee's discretion and allow licensees to continue to use the weapons qualification criteria in 10 CFR Part 73 Appendix B. This alternative was rejected because based upon the observed performance of some licensee guards, there is not sufficient assurance that the existing requirements are being implemented effectively. The second alternative considered was to impose these requirements on fuel fabrication facilities through the issuance of license conditions, orders, or regulatory guides. This alternative was rejected because the requirements to be modified are currently codified in the Code of Federal Regulations and amendments to them should be imposed through formal rulemaking. Also, formal rulemaking has the additional benefit of public participation in the rulemaking process.

V. Alternative Use of Resources

Subsequent to the submission of the licensee's Fixed Site Physical Protection Plans, the NRC will use about three staff weeks to review and approve the plans.

VI. Agencies and Persons Consulted

During the development of the proposed amendments, Mr. Philip Arzino from California State University at Hayward, and cognizant officials and managers at the Department of Energy were consulted. Furthermore, an expert review panel comprised of three members of the American College of Sports Medicine provided independent views and recommendations. The panel members were Dr. D. W. Hill, Ph.D., Dr. T. A. Kaplan, M.D., and Dr. J. E. Young, M.D., Ph.D.

VII. Finding of No Significant Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that the proposed amendments are not a major Federal action significantly affecting the quality of the human environment, and therefore, an environmental impact statement is not required. The proposed amendments would establish criteria for physical fitness training programs and periodic performance testing. The amendments will also update day firing qualification criteria. Neither of these actions will have a significant impact upon the environment.

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ENCLOSURE B
ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
For the Proposed Rule Amending 10 CFR 73 and Appendix H

Annual Physical Fitness Performance Testing and Day Firing .
Qualifications for Tactical Response Team Members,
Armed Response Personnel, and Guards

ENCLOSURE C
REGULATORY ANALYSIS

REGULATORY ANALYSIS

1. STATEMENT OF THE PROBLEM

The Nuclear Regulatory Commission (NRC) is proposing to amend security personnel performance regulations in 10 CFR Part 73 for licensees possessing formula quantities of strategic special nuclear material. The following upgrades in security personnel performance regulations are being proposed:

Physical Fitness Performance Testing

The proposed amendment would impose specific criteria for annual physical fitness performance testing of Tactical Response Team members, armed response personnel, and guards at Category I licensee fuel cycle facilities. Current regulations specify that security personnel have no physical weaknesses that would adversely affect the performance of their assigned duties. However, no regulatory criteria currently exist for assessing whether security personnel are physically fit to perform their duties. Criteria for annual physical fitness performance testing for security force personnel would better ensure that security personnel are capable of performing their assigned duties in the event of a strenuous tactical engagement.

Day Firing Qualification and Requalification

The proposed amendment would impose specific criteria for Tactical Response Team members, armed response personnel, and guards to qualify and periodically requalify utilizing specific updated qualification criteria for day firing of all assigned weapons. Current regulations require day firing qualification and requalification using a national police course or equivalent for handguns and an NRA or nationally recognized course for semi-automatic weapons. Key elements, such as firing positions, firing distances, reloading, and firing with the weaker hand are missing from the current day firing qualification criteria making it inconsistent with the night firing course, as the latter currently appears in 10 CFR Part 73, Appendix H.

1.1 Need for Proposed Amendments

This rulemaking will amend Part 73 of the Commission's regulations, "Physical Protection of Plants and Materials." Category I licensee Tactical Response Team members, armed response personnel, and guards are required to participate in periodic exercises to demonstrate security force effectiveness (10 CFR 73.46(b)(9)). However, during a 1988 DOE Central Training Academy course, NRC observers detected that some of the NRC licensee security force personnel were unable to participate in some of the tactical exercises. This observation led the NRC staff to question whether the current regulations are providing adequate assurance that security force personnel are physically fit and able to perform their duties under conditions of strenuous tactical engagements. Upon further study of this question, as discussed in the applicable Federal Register Notice, the staff concluded that the above tactical exercises did offer a viable representation of the sorts of actions Category I licensee personnel may be required to take and that specific criteria were needed to assure that such personnel would be physically capable of taking such actions.

1.2 Applicable NRC Licensees

The proposed amendments to 10 CFR Part 73 will impact two NRC Category I fuel cycle licensees.

1.3 Relationship to Other Existing or Proposed Regulations

There are no apparent conflicts or overlaps with other NRC regulations or policies nor with other agencies' regulations or policies.

2. OBJECTIVES OF THE RULE

The objectives of the proposed amendments are to (1) provide greater assurance that the security force personnel, at facilities possessing formula quantities of strategic special nuclear material are capable to perform their

duties under conditions of strenuous tactical engagements and (2) ensure that security force personnel are qualified for day firing of their assigned weapons using updated criteria which are consistent with those used for night firing.

3. ALTERNATIVES TO THE RULE

Three options are considered in this regulatory analysis. Summaries of the alternatives are provided in this section.

3.1 Option 1: No Action By the NRC

The following are the results of pursuing this option:

(1) There would continue to be no performance testing criteria or criteria and, therefore, there would be no confidence that security personnel are able to perform their assigned duties under conditions of strenuous tactical engagement.

(2) An outdated day firing qualification course which is inconsistent with the course required for night firing would continue to be required.

3.2 Option 2: Imposition Through Non-Rulemaking Approaches

Since the existing regulations in 10 CFR 73.46 Appendix B require that all Tactical Response Team members, armed response personnel, and guards are physically able to perform their duties, the NRC could impose the proposed requirements through issuance of an order, imposing the criteria contained in the proposed rule. Alternatively, the Commission could issue a regulatory guide containing the criteria to clarify to the licensee what is acceptable qualification. Each of these mechanisms would necessitate that each Category I fuel facility licensee revise current Fixed Site Physical Protection Plans to include:

(1) annual physical fitness performance testing and a minimum continuing physical fitness training program for the facilities security force personnel; and

(2) the NRC specified day firing qualification course using all assigned weapons.

3.3 Option 3: Adopt the Proposed Amendments

The result of following this option is the same as Option 2 for the two licensees in question. However, this option has the advantage of obtaining comments on the issues from the public prior to promulgation of the final rule.

4. CONSEQUENCES

This section discusses the expected costs and benefits of implementing the identified alternatives. The information used to determine the consequences associated with the rule were based on discussions with NRC staff, cognizant personnel and managers from Oak Ridge National Laboratory, Oak Ridge, Tennessee, California State University-Hayward, and discussions with the managers of YMCAs in areas near the applicable Category I fuel facility licensees concerning the cost of using these clubs as training facilities. Sections 4.1, 4.2, and 4.3 discuss the impact on the two facilities listed in Section 1.2 above, the NRC, and others, respectively.

4.1 Impacts on Industry

This section describes the costs that are expected to be incurred by the two licensees. The cost of pursuing Option 1 is zero. The costs of pursuing Options 2 and 3 are essentially identical to one another.

4.1.1 Physical Fitness Performance Training

Security force personnel would be required to participate in an ongoing physical training program in order to meet the performance criteria specified in the rule. Therefore, the cost of this requirement would be the labor cost for security force personnel while they participate in the program and the costs associated with the training facilities. To obtain the estimated incremental costs of this regulation, the cost licensees are incurring to meet existing physical training requirements is subtracted from the cost of this rule.

4.1.1.1 Labor Cost Estimate

In this section of the regulatory analysis, the labor cost will be estimated assuming that the licensee has no physical fitness training program at all. The adjustment required to account for the fact that licensees currently are required to have an annual physical demonstration will be covered in Section 4.1.1.4, where the total incremental cost is addressed.

The average hourly basic pay rate for security force personnel was solicited separately for each site. This analysis assumes that fully loaded labor costs will be double the average hourly rate. This analysis also assumes that each guard is to take three 1-hour training sessions per week with up to two hours of travel per week for off-site training and that each facility employs 110 guards. Thus, if each guard has 5 hours per week of training related time, and trains for 50 weeks per year, each facility will require 27,500 hours of security personnel time annually to meet the physical fitness training requirement in this proposed rule. The estimated annual labor cost for Plant A is \$627,000 and for Plant B is \$467,500. The total estimated annual labor cost for both plants is \$1,094,500. The total estimated lifetime cost, assuming a 30 year period with a 5 percent discount rate, is \$16.9 million. The calculation of these labor cost estimates is summarized in Table 1.

4.1.1.2 Club Membership Estimates

In this section of the regulatory analysis, the club membership cost will be estimated assuming that the licensee has no physical fitness training program at all.

For the purpose of this analysis, the annual corporate cost for a physical fitness training program was obtained from YMCAs near the applicable fuel cycle facilities. Each facility's annual health club (i.e., YMCA) costs were ascertained separately. For each guard, these memberships would cost \$115 and \$50 per year for Plant A and Plant B, respectively. The combined total annual cost is \$18,150. The combined total cost, over a 30 year life cycle assuming a discount rate of 5 percent, is approximately \$.3 million. The estimated health club membership costs are summarized in Table 2.

The proposed amendment does not require health club or YMCA membership. Most of the objectives of the annual physical fitness performance testing and the physical fitness training program may be accomplished through use of publicly available facilities without sophisticated equipment. Therefore, the cost estimates in this section may overstate the impact on the industry. However, the club membership costs are small in comparison to the labor costs. Therefore, savings derived from pursuing a less costly approach would not affect the conclusions of this analysis.

4.1.1.3 Other Costs

As part of the physical training program, licensees will be required to perform assessments of the effectiveness of the program for each participant every four months. The California State University-Hayward has estimated that each assessment would take about 20 minutes. Since these assessments would probably occur during the participant's normal training time and are relatively infrequent, no additional costs were assumed for the assessments.

The cost of obtaining initial and yearly medical examinations was also not considered in this analysis because security force personnel are currently required to have such examinations pursuant to 10 CFR Part 73, Appendix B.

4.1.1.4 Total Costs

In this section, the total cost of the upgraded physical fitness requirements will be estimated, then these costs will be adjusted to an incremental cost estimate to reflect the added cost over and above what licensees are currently doing to comply with NRC's regulations.

To obtain the total cost for the physical fitness training program per facility, the club membership costs are combined with the labor costs. Table 3 shows that the annual cost would be about \$1.1 million and the estimated lifetime cost, assuming a 30 year period with a 5 percent discount rate, is approximately \$17.1 million.

In order to assess the incremental costs of this rule, the costs summarized in Table 3 must be adjusted to reflect the fact that licensees are currently required to annually demonstrate that security force personnel are physically capable to perform their assigned duties. Although some form of physical fitness training would appear to be needed to pass this demonstration neither licensee had included an extensive fitness training program in their Fixed Site Physical Protection Plan. The annual demonstrations require one hour of each guard's time per year and one hour of time for the administrator of the test. Thus, these labor costs are estimated to be a total of 440 hours (110 guards per licensee x 2 hours per guard x 2 licensees) for the industry or \$8756 per year. Therefore, the annual incremental cost of this rule will be \$1,103,894 (\$1,112,650 - \$8756).

Some indirect benefits which could be derived by the licensees are a healthier, more physically fit guard force, which results in potentially fewer on-the-job injuries, decreased sick leave, and health insurance claims.

4.1.2 Day Firing Qualifications

The proposed amendments would require that security force personnel qualify and requalify annually using updated day firing qualification criteria for all assigned weapons. The affected Category I licensees are currently required to qualify and annually requalify security force personnel using a national police course (for handguns) and an NRA course (for semi-automatic

rifles) or an equivalent nationally recognized course. Although the proposed day firing criteria are more stringent than those which currently are specified in the regulations, each individual TRT member, armed response person, and guard is currently qualifying using both the night firing criteria of Part 73, and day firing criteria contained in the licensee's Weapons Qualification Plan that are very similar to the criteria being proposed. Based on this fact and the results of quarterly physical protection inspections of Tactical Response Teams for all assigned weapons, the staff believes that these individuals readily should be able to qualify using the proposed day firing criteria. Hence, the staff believes that these day firing criteria add no new burden.

4.2 Impacts on NRC

The NRC staff estimates that it will spend approximately \$4020 in travel expenses as a result of this proposed rule. This is based upon the assumption of a two-day three-person trip to each facility, costing about \$500 per person, and a total of twelve days per diem at a rate of \$85 per day. To determine the staff labor cost, it was assumed that another five days would be required to approve the revised security plans containing the measures licensees commit to taking in order to comply with the additional requirements of the rule, in addition to the twelve days assumed for travel. Thus, staff labor costs for 136 hours (17 days) at \$41 per hour would be \$5576. In addition, contractual support to develop guidance for the proposed rule will be \$300,000. Therefore, total implementation cost to NRC will be approximately \$310,000 and 136 hours of staff time.

4.3 Impacts on Others

The impact on the public is the benefit of increased assurance that security force personnel are capable to perform their duties under conditions of strenuous tactical engagement.

TABLE 1

PHYSICAL FITNESS TRAINING COSTS
LABOR COST ESTIMATES

Based on:

1. Three 1-hour training sessions per week and 40 minutes of commuting time per session.
2. Fully loaded labor cost assumed to be twice the basic pay rate.
3. One hundred and ten guards per plant.

ANNUAL LABOR COSTS

Plant A: 5Hrs/wk X 50 Wks/yr X 110 Guards X \$22.80/hr	=	\$627,000
Plant B: 5Hrs/wk X 50 Wks/yr X 110 Guards X \$17.00/hr	=	\$467,500
Total	=	\$1,094,500

TOTAL LABOR COSTS

(Assuming 30 year life cycle costing at a 5% real discount rate)¹.

Plant A: 15.4 X \$627,000	=	\$9,655,800
Plant B: 15.4 X \$467,500	=	\$7,199,500
Total	=	\$16,855,300

¹NUREG/CR-3568, PNL-4646, Table C.2, pg. C.5

TABLE 2

PHYSICAL FITNESS TRAINING COSTS
CLUB MEMBERSHIP COST ESTIMATES

Based on:

1. YMCA group membership rates in towns near the licensee facilities.

ANNUAL CLUB MEMBERSHIP COSTS

Plant A: \$115.00 X 110 Guard force members	=	\$12,650
Plant B: \$50.00 X 110 Guard force members	=	\$5,500
Total	=	\$18,150

TOTAL CLUB MEMBERSHIP COSTS

(Assuming 30 year life cycle costing at a 5% real discount rate)²

Plant A: 15.4 X \$12,650	=	\$194,810
Plant B: 15.4 X \$5,500	=	\$84,700
Total	=	\$279,510

²Ibid.

TABLE 3

COMBINED PHYSICAL FITNESS TRAINING COSTS
ANNUAL COST ESTIMATES

Plant A: \$627,000 + \$12,650 = \$639,650
Plant B: \$467,500 + \$5,500 = \$473,000
Total = \$1,112,650

TOTAL COSTS

(Assuming 30 year life cycle costing at a 5% real discount rate)³

Plant A: \$9,655,800 + \$194,810 = \$9,850,610
Plant B: \$7,199,500 + \$84,700 = \$7,284,200
Total = \$17,134,810

³Ibid.

5. DECISION RATIONALE

While Option 1 would result in no incremental cost, it has been rejected because it will not accomplish NRC's objective of assuring that a security force is in place which has the capability to perform its assigned tasks under conditions of strenuous tactical engagement. Option 2 and Option 3 have no difference in cost. Should Option 2 be pursued, the performance criteria and the annual performance testing would be imposed through a regulatory guide or order. Current physical fitness testing and training requirements for armed security force personnel are codified in 10 CFR Part 73. The amendments proposed in this rule provide specific physical fitness performance testing criteria to be met to ensure that armed response personnel will be able to perform their response duties under conditions of strenuous tactical engagements. Therefore, modifications to the codified requirements of Part 73 should be imposed through formal rulemaking. Moreover, proceeding to impose performance testing criteria by rulemaking will assure that all the appropriate issues are raised prior to imposition of the criteria. Therefore, Option 3 is preferred because the formal rulemaking process ensures public notification and provides an opportunity for public comment on the proposed requirements.

6. IMPLEMENTATION

Within 90 days after the effective date of the final rule, each licensee will be required to submit a revised Fixed Site Physical Protection Plan describing how the licensee will comply with the new requirements. Revised plans must be mailed to the Director, Division of Safeguards and Transportation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Within 180 days after Commission approval, each licensee will implement the revised security plans.

ENCLOSURE D
DRAFT CONGRESSIONAL LETTERS



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

The Honorable Philip R. Sharp, Chairman
Subcommittee on Energy and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The NRC has sent to the Office of the Federal Register for publication the enclosed proposed amendments to 10 CFR Part 73. The amendments, if adopted, would require licensees who are authorized to possess formula quantities of strategic special nuclear material to pass according to new criteria an annual physical fitness performance test and maintain a minimum ongoing physical fitness training program for its security force personnel. In addition, these amendments will require that security force personnel be qualified for use of assigned weapons using new day firing qualification criteria.

These proposed amendments will better ensure that security personnel are able to perform their assigned duties under conditions of strenuous tactical engagement.

The Commission is issuing the proposed rule for a 90-day public comment period.

Sincerely,

A handwritten signature in dark ink, appearing to read "Eric S. Beckjord".

Eric S. Beckjord, Director
Office of Nuclear Regulatory Research

Enclosure: As stated

cc: Representative Carlos J. Moorhead



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

The Honorable Bob Graham, Chairman
Subcommittee on Nuclear Regulation
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The NRC has sent to the Office of the Federal Register for publication the enclosed proposed amendments to 10 CFR Part 73. The amendments, if adopted, would require licensees who are authorized to possess formula quantities of strategic special nuclear material to pass according to new criteria an annual physical fitness performance test and maintain a minimum ongoing physical fitness training program for its security force personnel. In addition, these amendments will require that security force personnel be qualified for use of assigned weapons using new day firing qualification criteria.

These proposed amendments will better ensure that security personnel are able to perform their assigned duties under conditions of strenuous tactical engagement.

The Commission is issuing the proposed rule for a 90-day public comment period.

Sincerely,

A handwritten signature in cursive script that reads "Eric S. Beckjord".

Eric S. Beckjord, Director
Office of Nuclear Regulatory Research

Enclosure: As stated

cc: Senator Alan K. Simpson



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

The Honorable Peter H. Kostmayer, Chairman
Subcommittee on Energy and the Environment
Committee on Interior and Insular Affairs
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The NRC has sent to the Office of the Federal Register for publication the enclosed proposed amendments to 10 CFR Part 73. The amendments, if adopted, would require licensees who are authorized to possess formula quantities of strategic special nuclear material to pass according to new criteria an annual physical fitness performance test and maintain a minimum ongoing physical fitness training program for its security force personnel. In addition, these amendments will require that security force personnel be qualified for use of assigned weapons using new day firing qualification criteria.

These proposed amendments will better ensure that security personnel are able to perform their assigned duties under conditions of strenuous tactical engagement.

The Commission is issuing the proposed rule for a 90-day public comment period.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric S. Beckjord".

Eric S. Beckjord, Director
Office of Nuclear Regulatory Research

Enclosure: As stated

cc: Representative John J. Rhodes

ENCLOSURE E

DRAFT PUBLIC ANNOUNCEMENT

NRC PROPOSES ADDITIONAL SAFEGUARDS REQUIREMENTS
FOR FUEL FACILITIES POSSESSING FORMULA
QUANTITIES OF STRATEGIC SPECIAL NUCLEAR MATERIAL

The Nuclear Regulatory Commission (NRC) is considering amending its regulations for certain nuclear fuel facilities to ensure that the facilities' security guards can adequately perform their duties. The revisions would require the guards to participate in a continuing physical fitness program, pass an annual performance test, and qualify for daytime weapons firing according to new criteria.

The physical fitness program would have to be approved by the NRC and would be conducted three times a week, 45 minutes per session. The sessions would include aerobic exercises such as running and bicycling, as well as exercises that develop strength, flexibility, and endurance in the major muscle groups. Guards, armed response personnel, and tactical response team members (the primary response team for security protection for each shift) would be evaluated once every four months to determine the effectiveness of the fitness training program.

To demonstrate physical fitness, guards, armed response personnel, and tactical response team members would be required to run certain distances within specified times. For tactical response team members, the criteria would be a one-mile run in 8 minutes and 30 seconds or less and a 40 yard dash starting from a prone position in 8.0 seconds or less. For response guards and armed response personnel who are not members of the tactical response team, the criteria would be a one-half mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less. Each individual would have to requalify once every 12 months.

The requirements for daytime weapons firing qualification would be updated and made similar to requirements for night firing issued in November 1988.

Interested persons are invited to submit written comments on the proposed changes by [Insert a date after the proposed rule is approved for publication]. They should be addressed to the Secretary of the Commission, Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.



RULEMAKING ISSUE
(Notation Vote)

September 26, 1991

SECY-91-307

For: The Commissioners

From: James M. Taylor, Executive Director for Operations

Subject: PROPOSED AMENDMENTS TO 10 CFR PART 73, TO ESTABLISH CRITERIA FOR PHYSICAL FITNESS TRAINING AND ANNUAL PERFORMANCE TESTING, AND UPDATED DAY FIRING QUALIFICATIONS FOR TACTICAL RESPONSE TEAM MEMBERS, ARMED RESPONSE PERSONNEL, AND GUARDS AT FUEL CYCLE FACILITIES POSSESSING FORMULA QUANTITIES OF STRATEGIC SPECIAL NUCLEAR MATERIAL

Purpose: To obtain Commission approval to publish a notice of proposed rulemaking.

Issue: Whether the safeguards requirements set forth in Enclosure A should be imposed on NRC licensees who possess formula quantities of strategic special nuclear material (referred to as Category I) to ensure that facility Tactical Response Team members, armed response personnel, and guards are physically fit to perform their assigned duties, and that the day firing qualifications for those personnel are consistent with night firing qualifications.

Summary: This proposed amendment to the safeguards requirements in 10 CFR Part 73 is designed to correct two shortcomings. First, the staff has determined that certain classes of security force personnel may not be physically fit enough to perform their response duties effectively. The staff has concluded that a lack of specific physical training and

CONTACT:
H. Tovmassian, RES
492-3634

NOTE: TO BE MADE PUBLICLY AVAILABLE WHEN THE FINAL SRM IS MADE AVAILABLE

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performance testing criteria has led to this situation. Hence, this proposed amendment provides the criteria to be used for physical fitness training and performance testing. Second, the day firing course currently required in Part 73 for qualifying and requalifying security force personnel for use of their assigned weapons lacks the specificity and proficiency of that required for night firing.

Background:

On November 10, 1988, the NRC published amendments to 10 CFR Part 73 (53 FR 45447) that required fuel cycle licensees who possess formula quantities of strategic special nuclear material to establish and train, through periodic tactical exercises, Tactical Response Teams¹ (TRT) and to make available a force of guards² or armed response personnel³ to provide additional support to the TRT. TRT members, armed response personnel, and guards were also required to qualify annually for night firing with all assigned weapons.

At that time, no need for specific performance testing criteria was identified. However, as a result of NRC observations of licensee guard performance during a 1988 DOE Central Training Academy course, the NRC staff has concluded that criteria for physical performance testing of TRT members, armed response personnel, and guards and the specification of a minimum ongoing physical fitness training program are needed to assure the required level of fitness. The proposed rule will also amend the current day firing qualifications so that they will reflect the same degree of specificity and proficiency as the night firing requirements.

Discussion:

Current physical fitness qualification requirements for TRT members, armed response personnel, and guards are provided in Appendix B to 10 CFR Part 73 by a general performance statement which states that these individuals should have no physical weaknesses or abnormalities which would adversely impact the performance of assigned security duties. In addition, security force personnel are required to

¹"Tactical Response Team" means the primary response force for each shift which can be identified by a distinctive item of uniform, armed with specified weapons, and whose other duties permit immediate response.

²"Guard" means a uniformed individual armed with a firearm whose primary duty is the protection of special nuclear material against theft, the protection of a plant against radiological sabotage, or both.

³"Armed Response Personnel" means persons, not necessarily uniformed, whose primary duty in the event of attempted theft of special nuclear material or radiological sabotage shall be to respond, armed and equipped, to prevent or delay such actions.

demonstrate physical fitness for assigned duties by performing a practical physical exercise program within a specific time period and passing a qualifying medical examination by a licensed physician. Licensees describe their program in their guard qualification and training plan and NRC inspects for licensee compliance using the licensee's approved program. However, the Commission's regulations do not require any performance testing criteria.

In 1988, some NRC licensee guards participated in tactical exercises at the DOE Central Training Academy in Albuquerque, NM. The NRC observers noted that some of the NRC licensee guards were unable to participate in certain tactical exercises, apparently due to a lack of physical fitness. An examination of licensee exercise programs showed that they were probably inadequate to ensure the physical fitness level needed for strenuous tactical engagements. In order to assess the seriousness of this problem and to identify alternative corrective actions that were available, the staff undertook a more comprehensive analysis of security force personnel fitness at Category I licensee facilities.

The Department of Energy (DOE) owns and operates a number of facilities which also possess considerable strategic special nuclear material. These facilities are protected by guard forces in much the same way as NRC's Category I licensee facilities. The safeguards risk of these NRC licensed facilities is the same as the safeguards risk at the DOE facilities. Therefore, an equivalent level of safeguards is appropriate. The staff examined the DOE physical fitness training program for applicability to NRC Category I licensees. As part of this examination, California State University at Hayward (CSUH) performed an analysis of security force personnel response duties and conducted health screening and fitness tests on licensee guards at Category I facilities. CSUH concluded⁴ that the duties for DOE response guards and NRC response guards (i.e., TRT members) are essentially equivalent. Additionally, CSUH noted that in an emergency situation, such as might be encountered by a TRT member, individuals need a cardiovascular reserve to perform effectively. However, CSUH found that of 66 subjects tested, 26 percent had a poor level of cardiovascular fitness and an additional 29 percent were below average. Further, high body fat levels were noted (e.g., 26 percent were classified as obese). Overall,

⁴ Arzino, P. A., et. al., Physical Fitness for Security Guard Personnel, California State University at Hayward, January 1990.

the CSUH test results indicated that a potentially significant number of guards may not have a sufficient cardiovascular reserve for a TRT response situation, particularly if they must exert themselves at a high intensity in order to reach the scene of an incident or their designated post during a critical situation. As a result, CSUH recommended that a physical fitness performance testing and training program is needed. The staff agrees with these conclusions.

The two issues germane to physical fitness performance criteria are: (1) whether there is a minimum level of physical fitness which response guards need to maintain in order to perform their required tasks; and, (2) if so, what is that minimum level of physical fitness. The DOE Physical Standards Validation Study⁵ concluded that such a level exists. The study also concluded that an individual who can perform a one-mile run in 8.5 minutes or less and a forty-yard dash in 8 seconds or less has attained the minimum level of physical fitness needed to perform the tasks required of response guards. No guard who was unable to meet these performance criteria was able to successfully complete the response guard tasks.

CSUH also analyzed the duties of NRC support guards, i.e., armed response personnel and other assigned guards, and concluded that those duties were equivalent to DOE support guard duties (security inspectors). The duties of these support personnel differ from the Tactical Response Team in that they are not assigned offensive combative duties such as pursuit or assault. The DOE Physical Standards Validation Study determined that an individual who can run one-half mile in 4 minutes and 40 seconds or less and a 40-yard dash in 8.5 seconds or less has attained the minimum level of physical fitness needed to perform the defensive combative tasks required of supporting security personnel. In 1986, these criteria became mandatory for certain DOE security inspectors, depending upon the nature of the response duties assigned (10 CFR 1046 Subpt. B, App. A(F)(1)).

In addition, CSUH examined DOE's medical screening guidelines and recommended that the medical criteria contained within Appendix B to Part 73 be amended to conform to the DOE requirements.

⁵Telfair, W. D., et. al., United States Department of Energy Physical Standards Validation Study, Professional Management Associates, Inc., September 30, 1982.

DOE's Medical Screening Guidelines, Physical Fitness Training Guidelines, and Physical Performance Validation Study, as well as CSUH's recommendation for a minimum ongoing physical fitness program for Category I licensees were submitted to three experts from the American College of Sports Medicine for their review. Two of these individuals were medical doctors and the third was an exercise physiologist. The following summarizes this review:

1. The training program, as described in DOE's Physical Fitness Training Guidelines, is adequate to ensure proper conditioning prior to taking the annual performance tests. However, requirements for strength and flexibility conditioning should be added to the training program for completeness.
2. While the reviewers believe that there were weaknesses in the DOE Validation Study (e.g., age and gender differences were not adequately addressed), they believed that the study adequately established the aerobic and anaerobic performance testing criteria.
3. The reviewers suggested that a medical doctor be relied upon to provide the medical clearance for participation in the proposed training and testing programs. Specific guidelines for medical screening should be available for the examining physician.

Accordingly, the staff decided to accept the recommendations of CSUH and the reviewers.

The staff has considered a number of regulatory approaches to implement the performance testing criteria and the continuing physical training programs. These include: (1) the issuance of an order, (2) the issuance of a regulatory guide further clarifying what is acceptable to the NRC for meeting the existing performance requirements for guards and armed response personnel, (3) the issuance of license conditions, or (4) promulgation of a regulation.

Current physical fitness testing and training requirements for armed security force personnel are codified in 10 CFR Part 73. The amendments proposed in this paper provide specific physical fitness performance testing criteria to be met to ensure that armed response personnel will be able to perform their response duties under conditions of strenuous tactical engagements. Therefore, modifications to the codified requirements of Part 73 should be imposed through formal rulemaking. Moreover, proceeding to impose performance testing criteria by rulemaking will better assure that all appropriate issues are raised prior

to the imposition of the criteria. The staff proposes to use the performance criteria developed in the DOE Physical Standards Validation Study, and specify a minimum physical fitness training program.

Currently, TRT members, armed response personnel, and guards are subject to the night firing course specified in Appendix H to 10 CFR Part 73 for qualification and annual requalification for use of assigned weapons. The staff believes that it is appropriate that the course required for day firing qualification for the same personnel be at the same level of specificity and proficiency as the existing night firing course. Although the proposed day firing criteria are more stringent than those which currently are specified in the regulations, each individual TRT member, armed response person, and guard is currently qualifying using both the night firing criteria of Part 73, and day firing criteria contained in the licensee's Weapons Qualification Plan that are very similar to the criteria being proposed. Based on this fact and the results of quarterly physical protection inspections of Tactical Response Teams for all assigned weapons, the staff believes that these individuals readily should be able to qualify using the proposed day firing criteria. Hence, the staff believes that these day firing criteria add no new burden. None the less, since there has been no direct licensee experience with these precise criteria, the staff proposes to explicitly solicit comment on their appropriateness.

The following summarizes the proposed amendments as set forth in Enclosure A:

Physical Fitness

The proposed amendments would provide specific criteria for annual performance testing of TRT members, armed response personnel, and guards at Category I facilities. To ensure the effectiveness of the program, a minimum physical fitness training program and the performance criteria are included in the proposed regulation. This program is derived from the DOE's program, augmented as recommended by the CSUH study and the reviewers as cited earlier, and would require licensees to assess the general physical fitness of all program participants every four months in order to determine the effectiveness of the program and to modify an individual's training regime, as necessary. The performance criteria for TRT members are a one-mile run in 8 minutes and 30 seconds or less and a 40-yard dash starting from a prone position in 8 seconds or less. For armed response personnel and guards the criteria are a one-half mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less.

Day Firing Qualifications

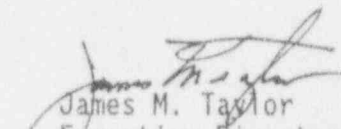
Day firing qualification criteria would be added to Appendix H of Part 73 and would be similar in format and content to the current Appendix H for night firing. The regulations would be amended to state that security force members must be prepared to demonstrate their qualification at any time upon request by an authorized representative of the NRC.

Coordination: Resources to implement this rulemaking are included in the draft FY 1992-1996 Five-Year Plan and no additional resources would be required for its implementation. The Office of the General Counsel has reviewed this paper and has no legal objections.

Recommendations: That the Commission:

1. Approve publication of the proposed amendments in the Federal Register with a 90-day public comment period.
2. Certify that the proposed amendments if adopted would not have a significant economic impact on a substantial number of small entities.
3. Note that:
 - a. A Draft Environmental Assessment stating that the proposed rulemaking will not have a significant environmental impact will be placed in the NRC Public Document Room (Enclosure B).
 - b. A Draft Regulatory Analysis will be placed in the NRC Public Document Room (Enclosure C).
 - c. The appropriate Congressional Committees will be informed of the Commission's action (Enclosure D).
 - d. A public announcement will be issued (Enclosure E).
 - e. The Federal Register Notice will be distributed by ADM to applicable licensees and other interested parties.
 - f. The Chief Counsel for Advocacy of the Small Business Administration will be informed of the certification and the reason for it, as required by the Regulatory Flexibility Act.

- g. The proposed rule contains information collection requirements that are subject to review by OMB. Upon Commission affirmation, formal request for OMB review and clearance will be initiated.


James M. Taylor
Executive Director
for Operations

Enclosures:

- A. Federal Register Notice of Proposed Rulemaking
- B. Draft Environmental Assessment
- C. Draft Regulatory Analysis
- D. Draft Congressional Letter
- E. Draft Public Announcement

Commissioners' comments or consent should be provided directly to the Office of the Secretary by COB Friday, October 11, 1991.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Friday, October 4, 1991, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

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ENCLOSURE A
FEDERAL REGISTER NOTICE

NUCLEAR REGULATORY COMMISSION

10 CFR PART 73

RIN:3150-AD30

Physical Fitness Programs and Day Firing Qualifications
For Security Personnel at Category I Licensee Fuel Cycle Facilities

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend security personnel performance regulations for fuel cycle facilities possessing formula quantities of strategic special nuclear material (Category I licensees).

Certain security personnel at these facilities would be required to participate in a continuing physical fitness program and pass according to new criteria an annual performance test. In addition, these individuals would be required to qualify and annually requalify according to new criteria for day firing using their assigned weapons. This action is necessary to ensure that security personnel are able to perform their assigned duties under conditions of strenuous tactical engagements.

DATES: The comment period expires on (Insert a date 90 days from publication). Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given unless comments are received on or before this date.

ADDRESSES: Mail written comments to: The Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch. Comments may also be delivered to 11555 Rockville Pike, Rockville, MD, between 7:30 a.m. and 4:15 p.m on Federal workdays. Copies of the environmental assessment and finding of no significant impact and any comments received will be available for examination and copying at the NRC Public Document Room at 2120 L Street, NW. (Lower Level), Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. Harry Tovmassian, Division of Regulatory Applications, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-3634; or Ms. Carrie Brown, Division of Safeguards and Transportation, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-0382.

SUPPLEMENTARY INFORMATION:

BACKGROUND

On November 10, 1988, the NRC published amendments to 10 CFR 73.46 which required fuel cycle licensees who possess formula quantities of strategic special nuclear material (Category I licensee) to establish and train Tactical Response Teams (TRT)¹, conduct periodic tactical

¹"Tactical Response Team" means the primary response force for each shift which can be identified by a distinctive item of uniform, armed with specified weapons, and whose other duties permit immediate response.

exercises, and make available a force of guards² or armed response personnel³ to provide assistance to the TRT, as necessary. These amendments also required that TRT members, armed response personnel, and guards qualify and annually requalify for night firing with assigned weapons by meeting new minimum qualification criteria specified in Appendix H to 10 CFR Part 73. At that time, no need for specific performance testing criteria was identified.

As a result of NRC observations of licensee guard performance during a 1988 DOE Central Training Academy course, the NRC requested California State University at Hayward (CSUH) to examine the physical fitness levels of security force personnel of licensees who possess formula quantities of strategic special nuclear material. In the subsequent study, CSUH noted that in an emergency situation, that may be encountered by a TRT member, individuals need a cardiovascular reserve to perform effectively. However, CSUH found that of 66 subjects tested, 26 percent had a poor level of cardiovascular fitness and an additional 29 percent were below average. Further, high body fat levels were noted (e.g., 26 percent were classified as obese). Overall, the CSUH test results indicated that a potentially significant number of guards may not have a sufficient cardiovascular reserve for a TRT response situation, particularly if they must exert themselves at a high intensity in order

²"Guard" means a uniformed individual armed with a firearm whose primary duty is the protection of special nuclear material against theft, the protection of a plant against radiological sabotage, or both.

³"Armed Response Personnel" means persons, not necessarily uniformed, whose primary duty in the event of attempted theft of special nuclear material or radiological sabotage shall be to respond, armed and equipped, to prevent or delay such actions.

to reach the scene of an incident or their designated post during a critical situation. Therefore, the Commission has concluded that criteria for physical performance testing of TRT members, armed response personnel, and guards and the specification of a minimum ongoing physical fitness training program are needed to ^{en} assure the ^{needed} required level of fitness. Accordingly, the NRC is proposing additional requirements relative to the physical fitness qualifications ^{of security personnel}.

Under these proposed regulations TRT members, armed response personnel, and guards would be required to participate in annual physical fitness performance testing. Individuals would be required to be certified as medically fit by a licensed physician prior to participation in the performance tests or in the training program designed to ensure that the individuals achieve and maintain the required fitness level. In addition, licensees will be required to assess the general fitness of each participant every four months and to make modifications to the individual's training regime, as necessary.

The minimum physical fitness training program needed to achieve the necessary fitness levels has been separated into two elements. The first element includes the training of individuals through cardiovascular training activities such as running, bicycling, rowing, swimming, or cross-country skiing. The individuals will be tested prior to assignment as a TRT member and each year thereafter using the performance criteria of a one-mile run in 8.5 minutes or less and a 40-yard dash starting from a prone position in 8.0 seconds or less. Likewise, armed response personnel and guards will be required to participate in the physical fitness training program. However, the performance criteria for these

individuals will be a 1/2 mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less. The former criteria have been validated to test the fitness levels required of individuals whose duties are to perform offensive combative tasks, such as those required of TRT members. The latter criteria have been validated to test the fitness levels required of individuals whose duties are to perform defensive combative tasks, such as armed response personnel and support guards⁴.

The second element of the physical fitness training program involves musculoskeletal training (i.e., exercises which develop strength, flexibility, and endurance in the major muscle groups). Although musculoskeletal training will be an integral part of the physical fitness training program, performance criteria have not been specified because to date there have been no validated studies which establish the levels of strength, flexibility, and endurance required of TRT members, armed response personnel, and guards under conditions of strenuous tactical engagement. However, the effectiveness of the musculoskeletal training will be included in the licensee's assessment program and the results will be used to make appropriate modifications to each individual's training regime.

Two documents have been prepared which may be used by licensees in developing physical fitness training programs and by physicians responsible for the required medical examinations of personnel participating in the programs. The first, "Physical Fitness Training

⁴ Telfair, W. D., et. al., United States Department of Energy Physical Standards Validation Study, Professional Management Associates, Inc., September 30, 1982.

Reference Manual for Security Force Personnel at Fuel Cycle Facilities Possessing Formula Quantities of Strategic Special Nuclear Material," NUREG/CR-5690⁵, provides information on designing and conducting a physical fitness training program. The second, "Medical Screening Reference Manual for Security Personnel at Category I Fuel Cycle Facilities Possessing Formula Quantities of Strategic Special Nuclear Material," NUREG/CR-5689, is intended for use by the examining physicians. These documents have been placed in the Public Document Room and are available for public inspection and copying.

In addition to proposing additional requirements for physical fitness, the NRC is also proposing to amend its day firing qualification criteria to make them consistent as to level of specificity and proficiency with the night firing requirements published in 1988. Although the proposed day firing criteria are more stringent than those which currently are specified in the regulations, each individual TRT member, armed response person, and guard is currently qualifying using both the night firing criteria contained in 10 CFR Part 73 and day firing criteria contained in the licensee's Weapon Qualification Plan that are very similar to the criteria being proposed. Based on this fact and the results of quarterly physical protection inspections of Tactical Response Teams for all assigned weapons, the staff believes that these individuals readily should be able to qualify using the proposed day firing criteria.

⁵Copies of NUREGs may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. Copies are also available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. A copy is also available for inspection or copying at the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.

Hence, the staff believes that these day firing criteria add no new burden. None the less, since there has been no direct licensee experience with these precise criteria, the NRC is requesting comment on their appropriateness.

Finding of no Significant Environmental Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and therefore an Environmental Impact Statement is not required. The proposed amendments will ^{not adversely} affect neither the safety of the operations carried out by licensees possessing formula quantities of strategic special nuclear material nor the routine release of, or exposures to, radioactivity. The amendments would: (1) specify annual performance testing criteria and a minimum physical fitness training program, and ensure that security force personnel can adequately perform their duties under conditions of strenuous tactical engagement; and (2) provide the same level of specificity and proficiency in the day firing weapons qualification criteria that is now present in the night firing criteria. ← ←

The environmental assessment and finding of no significant impact on which this determination is based is available for inspection at the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC. Single copies of the environmental assessment and finding of no

significant impact are available from Mr. Harry Tovmassian, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, (301) 492-3634.

PAPERWORK REDUCTION ACT STATEMENT

This proposed rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). The recordkeeping and reporting requirements in this rulemaking have been submitted to the Office of Management and Budget for review and approval of the information collection and recordkeeping requirements.

Public reporting burden for this collection of information is estimated to average ~~36~~⁴⁴ hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (MNBB-7714), U.S. Nuclear Regulatory Commission, Washington, DC 20555; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-3019, (3150-0002), Office of Management and Budget, Washington, DC 20503.

REGULATORY ANALYSIS

The Commission has prepared a draft regulatory analysis on this proposed amendment. The analysis examines the costs and benefits of the alternatives considered by the Commission. The draft analysis is available for inspection in the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC. Single copies of the analysis may be obtained from Ms. Carrie Brown, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, (301) 492-0382.

Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that this rulemaking will not have a significant economic impact upon a substantial number of small entities. The proposed rule would affect two licensees who operate fuel facilities possessing formula quantities of strategic special nuclear material licensed in accordance with 10 CFR Parts 70 and 73. The companies that own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the Small Business Standards set out in regulations issued by the Small Business Administration in 13 CFR Part 121. Furthermore, if a small entity were to apply for a license to possess formula quantities of strategic special nuclear material pursuant to 10 CFR Parts 70 and 73, the proposed rule by itself would not have a significant economic impact on their operations

because the economic impact would be dominated by the existing requirements for physical security and nuclear material control and accounting. Thus, this rule does not fall within the purview of the act.

Backfit Analysis

The NRC has determined that the backfit rule, 10 CFR 50.109, does not apply to this proposed rule and, therefore, a backfit analysis is not required for this proposed rule, since these amendments do not involve any provisions which would impose backfits ~~as defined in~~ 10 CFR 50.109 (a)(1).

of the types that are covered by

List of Subjects in 10 CFR Part 73

Part 73 - Criminal Penalty, Hazardous materials-transportation, Incorporation by reference, Nuclear materials, Nuclear power plants and reactors, Penalty, 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.

PART 73--PHYSICAL PROTECTION OF PLANTS AND MATERIALS

1. The authority citation for 10 CFR Part 73 continues to read as follows:

AUTHORITY: Secs. 53, 161, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2201); sec. 201, as amended, 204, 88 Stat. 1242, as amended, 1245 (42 U.S.C. 5841, 5844).

Section 73.1 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 73.37(f) also issued under sec. 301, Pub. L. 96-295, 94 Stat. 789 (42 U.S.C. 5841 note).

Section 73.57 is issued under sec. 606, Pub. L. 99-399, 100 Stat. 876 (42 U.S.C. 2169).

For the purposes of sec. 223, 68 Stat. 958, as amended, (42 U.S.C. 2273); §§ 73.21, 73.37(g), and 73.55 are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 73.20, 73.24, 73.25, 73.26, 73.27, 73.37, 73.40, 73.45, 73.46, 73.50, 73.55, and 73.67 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 73.20(c)(1), 73.24(b)(1), 73.26(b)(3), (h)(6), and (k)(4), 73.27(a) and (b), 73.37(f), 73.40(b) and (d), 73.46(g)(6) and (h)(2), 73.50(g)(2), (3)(iii)(B), and (h), 73.55(h)(2) and (4)(iii)(B), 73.57, 73.70, 73.71, and 73.72 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

2. In § 73.46 paragraphs (b)(4), (b)(7), and (i) are revised and new paragraphs (b)(10) and (b)(11) are added to read as follows:

§ 73.46 Fixed site physical protection systems, subsystems, components, and procedures.

* * * * *

(b) * * *

(4) The licensee may not permit an individual to act as a Tactical Response Team member, armed response person, or guard unless the individual has been trained, equipped, and qualified to perform each assigned security duty in accordance with Appendix B of this part, "General Criteria for Security Personnel." In addition, Tactical Response Team members, armed response personnel, and guards shall be trained, equipped, and qualified in accordance with paragraphs (b)(6), (b)(7), (b)(10), and (b)(11) of this section. Upon the request of an authorized representative of the Commission, the licensee shall demonstrate the ability of the physical security personnel, whether licensee or contractor employees, to carry out their assigned duties and responsibilities. Each Tactical Response Team member, armed response person, and guard, whether a licensee or contractor employee, shall requalify in accordance with Appendix B of this part. Tactical Response Team members, armed response personnel, and guards shall also requalify in accordance with paragraph (b)(7) of this section at least every twelve (12) months. The licensee shall document the results of the qualification and requalification. The licensee shall retain the documentation of each qualification and requalification as a record for three years after each qualification and requalification.

* * * * *

(7) In addition to the weapons qualification and requalification criteria of Appendix B of this part, Tactical Response Team members, armed response personnel, and guards shall qualify and requalify, at least every twelve (12) months, for day and night firing with assigned weapons in accordance with Appendix H of this part. Tactical Response Team members, armed response personnel, and guards shall be permitted to practice fire prior to qualification and requalification but shall be given only one opportunity to fire for record. If a Tactical Response Team member, armed response person, or guard fails to qualify, the licensee shall remove the individual from security duties which require the use of firearms and may retrain the individual. At least seven (7) calendar days must elapse before another attempt at qualification is permitted. If an individual fails to qualify or requalify in three (3) consecutive attempts, at least twelve (12) months must elapse before another attempt at qualification or requalification is permitted.

(i) In addition, Tactical Response Team members, armed response personnel, and guards shall be prepared to demonstrate their day and night firing qualification with their assigned weapons at any time upon request by an authorized representative of the NRC.

(ii) The licensee or the licensee's agent shall document the results of weapons qualification and requalification for day and night firing. The licensee shall retain the documentation of each qualification and requalification as a record for 3 years after each qualification and requalification.

* * * * *

(10) In addition to the physical fitness qualifications of paragraph I.C of Appendix B of this part, each Tactical Response Team member, armed response person, and guard shall participate in a physical fitness training program on a continuing basis.

(i) The elements of the physical fitness training program must include, but not necessarily be limited to, the following:

(A) Training sessions of sufficient frequency, duration, and intensity to be of aerobic benefit, e.g., normally a frequency of three times per week, maintaining an intensity of approximately 75% of maximum heart rate for twenty minutes;

(B) Activities that use large muscle groups, that can be maintained continuously, and that are rhythmical and aerobic in nature, e.g., running, bicycling, rowing, swimming, or cross-country skiing; and

(C) Musculoskeletal training exercises that develop strength, flexibility, and endurance in the major muscle groups, e.g., legs, arms, and shoulders.

(ii) The licensee shall assess Tactical Response Team members, armed response personnel, and guards for general fitness once every four months to determine the continued effectiveness of the ongoing physical fitness training program. Assessments must include a recent health history, measures of cardiovascular fitness, percent of body fat, flexibility, muscular strength, and endurance. Individual exercise programs must be modified consistent with the needs of each participating Tactical Response Team member, armed response person, and guard and consistent with the environments in which they must be prepared to perform their duties.

(iii) Within thirty (30) days prior to participation in the physical fitness training program, the licensee shall give Tactical Response Team members, armed response personnel, and guards a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical fitness training program.

(iv) Licensees may temporarily waive an individual's participation in the physical fitness training program on the advice of the licensee's examining physician, during which time the individual may not be assigned duties as a Tactical Response Team member.

(11) In addition to the physical fitness demonstration contained in paragraph I.C of Appendix B of this part, Tactical Response Team members, armed response personnel, and guards shall meet or exceed qualification criteria as defined in paragraphs (b)(11)(i) through (b)(11)(v) of this section initially and at least every twelve (12) months thereafter.

(i) For Tactical Response Team members the criteria are a one-mile run in 8 minutes and 30 seconds or less, and a 40-yard dash starting from a prone position in 8 seconds or less. For armed response personnel and guards that are not members of the Tactical Response Team the criteria are a one-half mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less. The test may be taken in ordinary athletic attire under the supervision of licensee designated personnel. The licensee shall retain a record of each individual's performance for three years.

(ii) Incumbent Tactical Response Team members, armed response personnel, and guards shall meet or exceed the qualification criteria within six (6) months of NRC approval of the licensee's revised Fixed Site Physical Protection Plan. New employees hired after the approval date shall meet or exceed the qualification criteria prior to assignment as a Tactical Response Team member, armed response person, or guard.

(iii) Within thirty days prior to participation in the physical performance testing, Tactical Response Team members, armed response personnel, and guards shall be given a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical performance testing. This requirement shall apply to initial and all subsequent physical performance testing.

(iv) The licensee shall place Tactical Response Team members, armed response persons, and guards who do not meet or exceed the qualification criteria in a monitored remedial physical fitness training program and relieve them of security duties which require the use of firearms. Individuals in the remedial physical fitness training program shall have a maximum of three (3) months to satisfactorily meet or exceed the qualification criteria.

(v) Licensees may temporarily waive the annual qualification testing for an individual on the advice of the licensee's examining physician, during which time the individual shall not be assigned duties as a Tactical Response Team member.

* * * * *

(i) Implementation schedule for revisions to physical protection plans.

(1) By (Insert a date 90 days after the effective date of these amendments) each licensee shall submit a revised Fixed Site Physical Protection Plan to the NRC for approval. The revised plan must describe how the licensee will comply with the requirements of paragraphs (b)(7), (b)(10), and (b)(11) of this section. Revised plans must be mailed to the Director, Division of Safeguards and Transportation, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(2) Each licensee shall implement the approved plan relative to paragraphs (b)(7), (b)(10), and (b)(11) of this section within 180 days after NRC approval of the revised Fixed Site Physical Protection Plan.

3. Appendix H is revised to read as follows:

APPENDIX H - WEAPONS QUALIFICATION CRITERIA

The B-27 Target will be used for all weapon qualification testing

Table H-1 Minimum Day Firing Criteria¹
(see footnotes at end of Table H-1)

Weapon	Stage	String ²	Distance	Number of rounds	Timing ³	Position	Scoring
Handgun ⁴	1	1	3 yards	6	9 seconds	Draw and fire 2 rounds (repeat 2 times) 3 seconds each string	70% = qualified, maximum possible = 300 points, minimum required = 210 points
		2					
		3					
	2	1	7 yards	6	10 seconds	Draw and fire 2 rounds at center mass and 1 round at the head (repeat once) 5 seconds each string	
		2					
	3	1	7 yards	6	12 seconds (4 seconds each string)	Using weaker hand only, at the low ready position, fire 2 rounds (repeat twice)	
		2					
	4	1	10 yards	2	4 seconds	Draw and fire 2 rounds, come to low ready position	
			2	10 yards	2	3 seconds	
		3	10 yards	4	12 seconds (revolver)	Draw and fire 2 rounds, reload with 6 rounds, fire 2 rounds and holster	
					10 seconds (semi-automatic)		
		4	10 yards	2	4 seconds	Draw and fire 2 rounds, come to low ready position	
		5	10 yards	2	3 seconds	Fire 2 rounds in low ready position and holster	
5	1	15 yards	2	5 seconds	Standing, draw weapon, go to kneeling position, then fire 2 rounds and holster		
					2	15 yards	2

Table H-1 Minimum Day Firing Criteria¹ - Continued
 (see footnotes at end of Table H-1)

Weapon	Stage	String ²	Distance	Number of rounds	Timing ³	Position	Scoring
Handgun ² (Cont'd)	5	3	14 yards	4	14 seconds (revolver) 12 seconds (semi-automatic)	Standing, draw weapon, fire 2 rounds, reload with 6 rounds, move to kneeling position and fire 2 rounds, reload with 6 rounds and	70% = qualified, maximum possible = 300 points, minimum required = 210 points
		4	14 yards	2	5 seconds	Draw weapon and fire 2 rounds standing, come to low ready position and...	
		5	14 yards	2	3 seconds	Fire 2 rounds	
	6	1	25 yards	2	5 seconds	Draw and fire 2 rounds, standing, left side of barricade	
		2	25 yards	2	5 seconds	Draw and fire 2 rounds, right side of barricade (standing)	
		3	25 yards	4	15 seconds (revolver) 12 seconds (semi-automatic)	Draw weapon and from standing to kneeling position, fire 2 rounds, left side of barricade, reload with 6 rounds, and still in the kneeling position, fire 2 rounds right side of barricade	
		4	25 yards	2	10 seconds	Draw weapon and go from standing to prone, fire 2 rounds	
		5	25 yards	2	10 seconds	Draw weapon and go from standing to prone, fire 2 rounds	
	7	1	50 yards	2	8 seconds	Draw weapon and fire 2 rounds from a standing barricade position (right or left side, shooter's option)	
		2	50 yards	2	10 seconds	Draw weapon and fire 2 rounds from a kneeling barricade position (right or left side, shooter's option)	
		3	50 yards	2	12 seconds	Draw weapon and fire 2 rounds from prone position	

Table H-1 Minimum Day Firing Criteria¹ - Continued
(see footnotes at end of Table H-1)

Weapon	Stage	String ²	Distance	Number of rounds	Timing ³	Position	Scoring
Shotgun ⁴	1	1	7 yards	2 Double 00 buck-shot	4 seconds	At low ready position fire 2 rounds standing	70% = qualifies (Maximum=94, Minimum=65) (each pellet in black target area equals 1 point)
	2	1 2	15 yards	4 Double 00 buck-shot	15 seconds	At low ready position fire 2 rounds standing, reload and fire 2 rounds	
	3	1 2	25 yards	4 rifled slugs	20 seconds	On command, load 4 rifled slugs and fire 2 rounds standing and 2 rounds kneeling	(10, 9, 8, 7 points are available for each hit as indicated)
Rifle ⁵	1	1 2 3	15 yards	6	10 seconds (4 seconds for 1st string, 3 seconds for each of 2nd and 3rd string)	Standing in low ready position, to standing point shoulder (1 magazine loaded with 6 rounds, weapon in half-load configuration) safety on beginning of each string, fire 2 rounds per string	70% = qualifies (Maximum = 150 points, Minimum = 105 points, based on 5 point increments)
	2	1 2 3	25 yards	6	11 seconds (5 seconds for 1st string, 3 seconds for each of 2nd and 3rd string)	Standing in low ready position, to standing point shoulder (1 magazine loaded with 6 rounds, weapon in half-load configuration) safety on beginning of each string, fire 2 rounds per string	
	3	1 2 3	25 yards	6	17 seconds (7 seconds for 1st string, 5 seconds for each of 2nd and 3rd string)	Standing in low ready position, to kneeling point shoulder (1 magazine loaded with 6 rounds, weapon in half-load configuration) safety on beginning of each string, fire 2 rounds per string	

Table H-1 Minimum Day Firing Criteria¹ - Continued
(see footnotes at end of Table H-1)

Weapon	Stage	String ²	Distance	Number of rounds	Timing ³	Position	Scoring
Rifle ³ (Cont'd)	4	1 2	50 yards	4	16 seconds (9 seconds for 1st string, 7 second for 2nd string)	Standing in low ready position, to kneeling point shoulder (1 magazine loaded with 4 rounds, weapon in half-load configuration) safety on beginning of each string, fire 2 rounds per string	70% = qualifies (Maximum = 150 points, Minimum = 105 points, based on 5 point increments)
	5 ⁴	1	50 yards	4	20 seconds	Standing in low ready position, go to prone (weapon in half-load configuration) safety on with two magazines each loaded with 2 rounds, fire 2 rounds, eject first magazine, reload with 2nd magazine and fire 2 rounds	
	6 ⁴	1	100 yards	4	25 seconds	Standing in low ready position, go to prone (weapon in half-load configuration) safety on two magazines each loaded with 2 rounds, fire 2 rounds, eject first magazine, reload with 2nd magazine and fire 2 rounds	

Footnotes

1. This day firing qualifications course is to be used by all TRT members, armed response personnel, and guards.
2. A string is one of the different phases within a single stage.
3. Security force personnel will be timed as shown.
4. Stages 5 and 6 are only to be used for .30 caliber rifles.

Table H-2 Minimum Night Firing Criteria

Weapon	Stage	Distance	No. of Rounds	Timing	Position	Scoring	Lighting
Handgun (Rev.)	1	7 yds		35 seconds	Standing-no artificial support	Minimum qualifying = 70%	For all courses 0.2 foot-candles at center mass of target area
	2	15 yds	12	45 seconds			
Handgun (Semi-)	1	7 yds	2 + clip	30 seconds	Standing-no artificial support		
	2	15 yds	2 + clip	40 seconds			
Shotgun	1	25 yds	2 rifled slugs	30 seconds (Load 2 slugs - chamber empty - Time starts - Commence firing)	Standing-strong shoulder	Rifled slug hits = strike area on target (10, 9, 7)	
	1	15 yds	5 Double 00 buckshot	10 seconds (Load 5rds Buckshot - chamber empty - Time starts - Commence firing)	Standing-strong shoulder	Double 00 Buckshot: Hits in black= 2 pts (5rds x 9 pellets/rd x 2 pts=90) Minimum qualifying = 70%	
Rifle	1	25 yds	1-5rd mag.	45 sec.	Standing-Barricade	Minimum qualifying =70%	
	2	25 yds	1-5rd mag.	45 sec.	Standing		
	3	25 yds	1-5rd mag.	45 sec.	Kneeling		
	4	25 yds	1-5rd mag.	45 sec.	Prone		

Note. - All firing is to be done only at night. Use of night simulation equipment during daylight is not allowable. Use of site specific devices (i.e., laser, etc.) should be included in the licensee amended security plan for NRC approval.

Dated at Rockville, Maryland, this _____ day of _____, 1991.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,
Secretary of the Commission.

DOC. FILE NAME: FRN-RULE.TC'
LONG DISPLAY: Phys Fit/Day Fire Qual Rule
CREATED:
AUTHOR: Harry Tovmassian
REVISED: 8/15,19/91 08/22/91 08/29/91
TYPIST: LCrossland STaylor S.Taylor
TIME: 7:50 a.m. 3:45 p.m. 9:30 a.m.
REVISED: 08/29/91 08/30/91 9/3,5
TYPIST: S.Taylor S.Taylor LCrossland
TIME: 4:15 p.m. 4:30 pm 2:20 pm
REVISED: 09/16/91 09/17/91 09/19/91 9/23/91
TYPIST: S.Taylor S.Taylor S.Taylor LCrossland
TIME: 4:30 p.m. 2 p.m. 1:50 pm 7:25 am
EXCERPT:

ENCLOSURE A

FEDERAL REGISTER NOTICE

[7590-01]

NUCLEAR REGULATORY COMMISSION

10 CFR PART 73
RIN:3150-AD30

Physical Fitness Programs and Day Firing Qualifications
For Security Personnel at Category I Fuel Cycle Facilities

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

ENCLOSURE A
FEDERAL REGISTER NOTICE

ENCLOSURE B
ENVIRONMENTAL ASSESSMENT

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
For the Proposed Rule Amending 10 CFR 73 and Appendix H

Annual Physical Fitness Performance Testing and Day Firing
Qualifications for Tactical Response Team Members,
Armed Response Personnel, and Guards

I. Introduction

The Nuclear Regulatory Commission (NRC) is proposing to amend 10 CFR Part 73 which contains safeguards requirements affecting licensees authorized to possess formula quantities of Strategic Special Nuclear Material (SSNM). These amendments would provide criteria for physical performance training program for, and (2) criteria for annual physical performance testing of members of their Tactical Response Teams (TRT), armed response personnel, and guards. In addition, it proposes to augment the current Appendix H which specifies the night firing qualification criteria with qualification requirements for day firing of the same level of specificity and proficiency. These requirements have been proposed in order to ensure that guards at such facilities are physically fit to perform their duties under conditions of strenuous tactical engagement and are qualified to use their weapons.

II. Need for Action

Currently, NRC licensed fuel fabrication facilities possessing formula quantities of strategic special nuclear material are required to establish and train Tactical Response Teams and to make available a force of armed response personnel or guards to provide assistance in the event of a hostile engagement. The NRC has concluded that implementation of these requirements may not be completely effective from observing the performance of some licensee guards who participated in a Department of Energy (DOE) training exercise. After subsequent examination of the DOE guard training and testing program, the NRC has determined that specific criteria for the physical training and testing of TRT members, armed response personnel, and guards are needed.

The NRC is proposing to revise Appendix H of 10 CFR Part 73 to include day firing qualification criteria. This amendment would update the day firing qualification criteria for security force personnel and at the same time bring them to the same level of specificity and proficiency as those in use for night firing.

III. Environmental Impact of the Proposed Action

These amendments will affect neither the safety of operation nor the routine release of, or exposure to, radioactivity from the fuel facilities possessing formula quantities of SSNM.

The following two amendments are proposed: (1) annual physical fitness performance testing and (2) day firing qualification criteria for security force personnel using all assigned weapons. Neither of these measures has any identifiable environmental impacts.

IV. Alternative to the Proposed Action.

Section 102(2)(E) of NEPA provides that agencies of the Federal Government shall "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." The objective of these amendments is to provide greater assurance that the security personnel capabilities at fuel facilities possessing formula quantities of SSNM are maintained at a level commensurate with their responsibilities.

Two alternatives to the proposed amendments were examined. The first was to take no action and leave the physical fitness of TRT members, armed response personnel, and guards to the licensee's discretion and allow licensees to continue to use the weapons qualification criteria in 10 CFR Part 73 Appendix B. This alternative was rejected because based upon the observed performance of some licensee guards, there is not sufficient assurance that the existing requirements are being implemented effectively. The second alternative considered was to impose these requirements on fuel fabrication facilities through the issuance of license conditions, orders, or regulatory guides. This alternative was rejected because the requirements to be modified are currently codified in the Code of Federal Regulations and amendments to them should be imposed through formal rulemaking. Also, formal rulemaking has the additional benefit of public participation in the rulemaking process.

V. Alternative Use of Resources

Subsequent to the submission of the licensee's Fixed Site Physical Protection Plans, the NRC will use about three staff weeks to review and approve the plans.

VI. Agencies and Persons Consulted

During the development of the proposed amendments, Mr. Philip Arzino from California State University at Hayward, and cognizant officials and managers at the Department of Energy were consulted. Furthermore, an expert review panel comprised of three members of the American College of Sports Medicine provided independent views and recommendations. The panel members were Dr. D. W. Hill, Ph.D., Dr. T. A. Kaplan, M.D., and Dr. J. E. Young, M.D., Ph.D.

VII. Finding of No Significant Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that the proposed amendments are not a major Federal action significantly affecting the quality of the human environment, and therefore, an environmental impact statement is not required. The proposed amendments would establish criteria for physical fitness training programs and periodic performance testing. The amendments will also update day firing qualification criteria. Neither of these actions will have a significant impact upon the environment.

ENCLOSURE C
REGULATORY ANALYSIS

REGULATORY ANALYSIS

1. STATEMENT OF THE PROBLEM

The Nuclear Regulatory Commission (NRC) is proposing to amend security personnel performance regulations in 10 CFR Part 73 for licensees possessing formula quantities of strategic special nuclear material. The following upgrades in security personnel performance regulations are being proposed:

Physical Fitness Performance Testing

The proposed amendment would impose specific criteria for annual physical fitness performance testing of Tactical Response Team members, armed response personnel, and guards at Category I licensee fuel cycle facilities. Current regulations specify that security personnel have no physical weaknesses that would adversely affect the performance of their assigned duties. However, no regulatory criteria currently exist for assessing whether security personnel are physically fit to perform their duties. Criteria for annual physical fitness performance testing for security force personnel would better ensure that security personnel are capable of performing their assigned duties in the event of a strenuous tactical engagement.

Day Firing Qualification and Requalification

The proposed amendment would impose specific criteria for Tactical Response Team members, armed response personnel, and guards to qualify and periodically requalify utilizing specific updated qualification criteria for day firing of all assigned weapons. Current regulations require day firing qualification and requalification using a national police course or equivalent for handguns and an NRA or nationally recognized course for semi-automatic weapons. Key elements, such as firing positions, firing distances, reloading, and firing with the weaker hand are missing from the current day firing qualification criteria making it inconsistent with the night firing course, as the latter currently appears in 10 CFR Part 73, Appendix H.

1.1 Need for Proposed Amendments

This rulemaking will amend Part 73 of the Commission's regulations, "Physical Protection of Plants and Materials." Category I licensee Tactical Response Team members, armed response personnel, and guards are required to participate in periodic exercises to demonstrate security force effectiveness (10 CFR 73.46(b)(9)). However, during a 1988 DOE Central Training Academy course, NRC observers detected that some of the NRC licensee security force personnel were unable to participate in some of the tactical exercises. This observation led the NRC staff to question whether the current regulations are providing adequate assurance that security force personnel are physically fit and able to perform their duties under conditions of strenuous tactical engagements. Upon further study of this question, as discussed in the applicable Federal Register Notice, the staff concluded that the above tactical exercises did offer a viable representation of the sorts of actions Category I licensee personnel may be required to take and that specific criteria were needed to assure that such personnel would be physically capable of taking such actions.

1.2 Applicable NRC Licensees

The proposed amendments to 10 CFR Part 73 will impact two NRC Category I fuel cycle licensees.

1.3 Relationship to Other Existing or Proposed Regulations

There are no apparent conflicts or overlaps with other NRC regulations or policies nor with other agencies' regulations or policies.

2. OBJECTIVES OF THE RULE

The objectives of the proposed amendments are to (1) provide greater assurance that the security force personnel, at facilities possessing formula quantities of strategic special nuclear material are capable to perform their

duties under conditions of strenuous tactical engagements and (2) ensure that security force personnel are qualified for day firing of their assigned weapons using updated criteria which are consistent with those used for night firing.

3. ALTERNATIVES TO THE RULE

Three options are considered in this regulatory analysis. Summaries of the alternatives are provided in this section.

3.1 Option 1: No Action By the NRC

The following are the results of pursuing this option:

(1) There would continue to be no performance testing criteria or criteria and, therefore, there would be no confidence that security personnel are able to perform their assigned duties under conditions of strenuous tactical engagement.

(2) An outdated day firing qualification course which is inconsistent with the course required for night firing would continue to be required.

3.2 Option 2: Imposition Through Non-Rulemaking Approaches

Since the existing regulations in 10 CFR 73.46 Appendix B require that all Tactical Response Team members, armed response personnel, and guards are physically able to perform their duties, the NRC could impose the proposed requirements through issuance of an order, imposing the criteria contained in the proposed rule. Alternatively, the Commission could issue a regulatory guide containing the criteria to clarify to the licensee what is acceptable qualification. Each of these mechanisms would necessitate that each Category I fuel facility licensee revise current Fixed Site Physical Protection Plans to include:

(1) annual physical fitness performance testing and a minimum continuing physical fitness training program for the facilities security force personnel; and

(2) the NRC specified day firing qualification course using all assigned weapons.

3.3 Option 3: Adopt the Proposed Amendments

The result of following this option is the same as Option 2 for the two licensees in question. However, this option has the advantage of obtaining comments on the issues from the public prior to promulgation of the final rule.

4. CONSEQUENCES

This section discusses the expected costs and benefits of implementing the identified alternatives. The information used to determine the consequences associated with the rule were based on discussions with NRC staff, cognizant personnel and managers from Oak Ridge National Laboratory, Oak Ridge, Tennessee, California State University-Hayward, and discussions with the managers of YMCAs in areas near the applicable Category I fuel facility licensees concerning the cost of using these clubs as training facilities. Sections 4.1, 4.2, and 4.3 discuss the impact on the two facilities listed in Section 1.2 above, the NRC, and others, respectively.

4.1 Impacts on Industry

This section describes the costs that are expected to be incurred by the two licensees. The cost of pursuing Option 1 is zero. The costs of pursuing Options 2 and 3 are essentially identical to one another.

4.1.1 Physical Fitness Performance Training

Security force personnel would be required to participate in an ongoing physical training program in order to meet the performance criteria specified in the rule. Therefore, the cost of this requirement would be the labor cost for security force personnel while they participate in the program and the costs associated with the training facilities. To obtain the estimated incremental costs of this regulation, the cost licensees are incurring to meet existing physical training requirements is subtracted from the cost of this rule.

4.1.1.1 Labor Cost Estimate

In this section of the regulatory analysis, the labor cost will be estimated assuming that the licensee has no physical fitness training program at all. The adjustment required to account for the fact that licensees currently are required to have an annual physical demonstration will be covered in Section 4.1.1.4, where the total incremental cost is addressed.

The average hourly basic pay rate for security force personnel was solicited separately for each site. This analysis assumes that fully loaded labor costs will be double the average hourly rate. This analysis also assumes that each guard is to take three 1-hour training sessions per week with up to two hours of travel per week for off-site training and that each facility employs 110 guards. Thus, if each guard has 5 hours per week of training related time, and trains for 50 weeks per year, each facility will require 27,500 hours of security personnel time annually to meet the physical fitness training requirement in this proposed rule. The estimated annual labor cost for Plant A is \$627,000 and for Plant B is \$467,500. The total estimated annual labor cost for both plants is \$1,094,500. The total estimated lifetime cost, assuming a 30 year period with a 5 percent discount rate, is \$16.9 million. The calculation of these labor cost estimates is summarized in Table 1.

4.1.1.2 Club Membership Estimates

In this section of the regulatory analysis, the club membership cost will be estimated assuming that the licensee has no physical fitness training program at all.

For the purpose of this analysis, the annual corporate cost for a physical fitness training program was obtained from YMCAs near the applicable fuel cycle facilities. Each facility's annual health club (i.e., YMCA) costs were ascertained separately. For each guard, these memberships would cost \$115 and \$50 per year for Plant A and Plant B, respectively. The combined total annual cost is \$18,150. The combined total cost, over a 30 year life cycle assuming a discount rate of 5 percent, is approximately \$.3 million. The estimated health club membership costs are summarized in Table 2.

The proposed amendment does not require health club or YMCA membership. Most of the objectives of the annual physical fitness performance testing and the physical fitness training program may be accomplished through use of publicly available facilities without sophisticated equipment. Therefore, the cost estimates in this section may overstate the impact on the industry. However, the club membership costs are small in comparison to the labor costs. Therefore, savings derived from pursuing a less costly approach would not affect the conclusions of this analysis.

4.1.1.3 Other Costs

As part of the physical training program, licensees will be required to perform assessments of the effectiveness of the program for each participant every four months. The California State University-Hayward has estimated that each assessment would take about 20 minutes. Since these assessments would probably occur during the participant's normal training time and are relatively infrequent, no additional costs were assumed for the assessments.

The cost of obtaining initial and yearly medical examinations was also not considered in this analysis because security force personnel are currently required to have such examinations pursuant to 10 CFR Part 73, Appendix B.

4.1.1.4 Total Costs

In this section, the total cost of the upgraded physical fitness requirements will be estimated, then these costs will be adjusted to an incremental cost estimate to reflect the added cost over and above what licensees are currently doing to comply with NRC's regulations.

To obtain the total cost for the physical fitness training program per facility, the club membership costs are combined with the labor costs. Table 3 shows that the annual cost would be about \$1.1 million and the estimated lifetime cost, assuming a 30 year period with a 5 percent discount rate, is approximately \$17.1 million.

In order to assess the incremental costs of this rule, the costs summarized in Table 3 must be adjusted to reflect the fact that licensees are currently required to annually demonstrate that security force personnel are physically capable to perform their assigned duties. Although some form of physical fitness training would appear to be needed to pass this demonstration neither licensee had included an extensive fitness training program in their Fixed Site Physical Protection Plan. The annual demonstrations require one hour of each guard's time per year and one hour of time for the administrator of the test. Thus, these labor costs are estimated to be a total of 440 hours (110 guards per licensee x 2 hours per guard x 2 licensees) for the industry or \$8756 per year. Therefore, the annual incremental cost of this rule will be \$1,103,894 (\$1,112,650 - \$8756).

Some indirect benefits which could be derived by the licensees are a healthier, more physically fit guard force, which results in potentially fewer on-the-job injuries, decreased sick leave, and health insurance claims.

4.1.2 Day Firing Qualifications

The proposed amendments would require that security force personnel qualify and requalify annually using updated day firing qualification criteria for all assigned weapons. The affected Category I licensees are currently required to qualify and annually requalify security force personnel using a national police course (for handguns) and an NRA course (for semi-automatic

rifles) or an equivalent nationally recognized course. Although the proposed day firing criteria are more stringent than those which currently are specified in the regulations, each individual TRT member, armed response person, and guard is currently qualifying using both the night firing criteria of Part 73, and day firing criteria contained in the licensee's Weapons Qualification Plan that are very similar to the criteria being proposed. Based on this fact and the results of quarterly physical protection inspections of Tactical Response Teams for all assigned weapons, the staff believes that these individuals readily should be able to qualify using the proposed day firing criteria. Hence, the staff believes that these day firing criteria add no new burden.

4.2 Impacts on NRC

The NRC staff estimates that it will spend approximately \$4020 in travel expenses as a result of this proposed rule. This is based upon the assumption of a two-day three-person trip to each facility, costing about \$500 per person, and a total of twelve days per diem at a rate of \$85 per day. To determine the staff labor cost, it was assumed that another five days would be required to approve the revised security plans containing the measures licensees commit to taking in order to comply with the additional requirements of the rule, in addition to the twelve days assumed for travel. Thus, staff labor costs for 136 hours (17 days) at \$41 per hour would be \$5576. In addition, contractual support to develop guidance for the proposed rule will be \$300,000. Therefore, total implementation cost to NRC will be approximately \$310,000 and 136 hours of staff time.

4.3 Impacts on Others

The impact on the public is the benefit of increased assurance that security force personnel are capable to perform their duties under conditions of strenuous tactical engagement.

TABLE 1

PHYSICAL FITNESS TRAINING COSTS
LABOR COST ESTIMATES

Based on:

1. Three 1-hour training sessions per week and 40 minutes of commuting time per session.
2. Fully loaded labor cost assumed to be twice the basic pay rate.
3. One hundred and ten guards per plant.

ANNUAL LABOR COSTS

Plant A: 5Hrs/wk X 50 Wks/yr X 110 Guards X \$22.80/hr	=	\$627,000
Plant B: 5Hrs/wk X 50 Wks/yr X 110 Guards X \$17.00/hr	=	\$467,500
Total	=	\$1,094,500

TOTAL LABOR COSTS

(Assuming 30 year life cycle costing at a 5% real discount rate)¹ .

Plant A: 15.4 X \$627,000	=	\$9,655,800
Plant B: 15.4 X \$467,500	=	\$7,199,500
Total	=	\$16,855,300

¹NUREG/CR-3568, PNL-4646, Table C.2, pg. C.5

TABLE 2

PHYSICAL FITNESS TRAINING COSTS
CLUB MEMBERSHIP COST ESTIMATES

Based on:

1. YMCA group membership rates in towns near the licensee facilities.

ANNUAL CLUB MEMBERSHIP COSTS

Plant A: \$115.00 X 110 Guard force members	=	\$12,650
Plant B: \$50.00 X 110 Guard force members	=	\$5,500
Total	=	\$18,150

TOTAL CLUB MEMBERSHIP COSTS

(Assuming 30 year life cycle costing at a 5% real discount rate)²

Plant A: 15.4 X \$12,650	=	\$194,810
Plant B: 15.4 X \$5,500	=	\$84,700
Total	=	\$279,510

²Ibid.

TABLE 3

COMBINED PHYSICAL FITNESS TRAINING COSTS
ANNUAL COST ESTIMATES

Plant A: \$627,000 + \$12,650 = \$639,650
Plant B: \$467,500 + \$5,500 = \$473,000
Total = \$1,112,650

TOTAL COSTS

(Assuming 30 year life cycle costing at a 5% real discount rate)³

Plant A: \$9,655,800 + \$194,810 = \$9,850,610
Plant B: \$7,199,500 + \$84,700 = \$7,284,200
Total = \$17,134,810

³ibid.

5. DECISION RATIONALE

While Option 1 would result in no incremental cost, it has been rejected because it will not accomplish NRC's objective of assuring that a security force is in place which has the capability to perform its assigned tasks under conditions of strenuous tactical engagement. Option 2 and Option 3 have no difference in cost. Should Option 2 be pursued, the performance criteria and the annual performance testing would be imposed through a regulatory guide or order. Current physical fitness testing and training requirements for armed security force personnel are codified in 10 CFR Part 73. The amendments proposed in this rule provide specific physical fitness performance testing criteria to be met to ensure that armed response personnel will be able to perform their response duties under conditions of strenuous tactical engagements. Therefore, modifications to the codified requirements of Part 73 should be imposed through formal rulemaking. Moreover, proceeding to impose performance testing criteria by rulemaking will assure that all the appropriate issues are raised prior to imposition of the criteria. Therefore, Option 3 is preferred because the formal rulemaking process ensures public notification and provides an opportunity for public comment on the proposed requirements.

6. IMPLEMENTATION

Within 90 days after the effective date of the final rule, each licensee will be required to submit a revised Fixed Site Physical Protection Plan describing how the licensee will comply with the new requirements. Revised plans must be mailed to the Director, Division of Safeguards and Transportation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555. Within 180 days after Commission approval, each licensee will implement the revised security plans.

ENCLOSURE D
DRAFT CONGRESSIONAL LETTER



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

The Honorable Philip R. Sharp, Chairman
Subcommittee on Energy and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

The NRC has sent to the Office of the Federal Register for publication the enclosed proposed amendments to 10 CFR Part 73. The amendments, if adopted, would require licensees who are authorized to possess formula quantities of strategic special nuclear material to pass according to new criteria an annual physical fitness performance test and maintain a minimum ongoing physical fitness training program for its security force personnel. In addition, these amendments will require that security force personnel be qualified for use of assigned weapons using new day firing qualification criteria.

These proposed amendments will better ensure that security personnel are able to perform their assigned duties under conditions of strenuous tactical engagement.

The Commission is issuing the proposed rule for a 90-day public comment period.

Sincerely,

A handwritten signature in cursive script that reads "Eric S. Beckjord".

Eric S. Beckjord, Director
Office of Nuclear Regulatory Research

Enclosure: As stated

cc: Representative Carlos J. Moorhead

ENCLOSURE E
DRAFT PUBLIC ANNOUNCEMENT

NRC PROPOSES ADDITIONAL SAFEGUARDS REQUIREMENTS
FOR FUEL FACILITIES POSSESSING FORMULA
QUANTITIES OF STRATEGIC SPECIAL NUCLEAR MATERIAL

The Nuclear Regulatory Commission (NRC) is considering amending its regulations for certain nuclear fuel facilities to ensure that the facilities' security guards can adequately perform their duties. The revisions would require the guards to participate in a continuing physical fitness program, pass an annual performance test, and qualify for daytime weapons firing according to new criteria.

The physical fitness program would have to be approved by the NRC and ~~would be conducted three times a week, 45 minutes per session.~~ The sessions would include aerobic exercises such as running and bicycling, as well as exercises that develop strength, flexibility, and endurance in the major muscle groups. Guards, armed response personnel, and tactical response team members (the primary response team for security protection for each shift) would be evaluated once every four months to determine the effectiveness of the fitness training program.

To demonstrate physical fitness, guards, armed response personnel, and tactical response team members would be required to run certain distances within specified times. For tactical response team members, the criteria would be a one-mile run in 8 minutes and 30 seconds or less and a 40 yard dash starting from a prone position in 8.0 seconds or less. For response guards and armed response personnel who are not members of the tactical response team, the criteria would be a one-half mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less. Each individual would have to requalify once every 12 months.

The requirements for daytime weapons firing qualification would be updated and made similar to requirements for night firing issued in November 1988.

Interested persons are invited to submit written comments on the proposed changes by [Insert a date after the proposed rule is approved for publication]. They should be addressed to the Secretary of the Commission, Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.



OFFICE OF THE SECRETARY

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

November 4, 1991

AD 30-1 013 PDR ACTION - Beckjord, RES

Cys: Taylor Sniezek Thompson Blaha Bernero, NMSS Scroggins, OC HTovmassian, RES DMeyer, ADM BShelton, IRM

MEMORANDUM FOR: James M. Taylor Executive Director for Operations FROM: Samuel J. Chilk, Secretary SUBJECT: SECY-91-307 - PROPOSED AMENDMENTS TO 10 CFR PART 73, TO ESTABLISH CRITERIA FOR PHYSICAL FITNESS TRAINING AND ANNUAL PERFORMANCE TESTING, AND UPDATED DAY FIRING QUALIFICATIONS FOR TACTICAL RESPONSE TEAM MEMBERS, ARMED RESPONSE PERSONNEL, AND GUARDS AT FUEL CYCLE FACILITIES POSSESSING FORMULA QUANTITIES OF STRATEGIC SPECIAL NUCLEAR MATERIAL

The Commission (with all Commissioners agreeing) has approved publication of the proposed amendments in the Federal Register with a 90-day public comment period subject to the modifications on the attached pages.

Wits 8900065 (EDO Suspense: 11/14/91)

Attachment: As stated

cc: The Chairman Commissioner Rogers Commissioner Curtiss Commissioner Remick OGC GPA OIG

SECY NOTE: THIS SRM, SECY-91-307, AND THE VOTE SHEETS OF THE CHAIRMAN AND COMMISSIONER CURTISS WILL BE MADE PUBLICLY AVAILABLE 10 WORKING DAYS FROM THE DATE OF THIS SRM

9112100290 SPP

to reach the scene of an incident or their designated post during a critical situation. Therefore, the Commission has concluded that criteria for physical performance testing of TRT members, armed response personnel, and guards and the specification of a minimum ongoing physical fitness training program are needed to ^{en} assure the ~~required~~ ^{needed} level of fitness. Accordingly, the NRC is proposing additional requirements relative to the physical fitness qualifications ^{of security personnel.}

Under these proposed regulations TRT members, armed response personnel, and guards would be required to participate in annual physical fitness performance testing. Individuals would be required to be certified as medically fit by a licensed physician prior to participation in the performance tests or in the training program designed to ensure that the individuals achieve and maintain the required fitness level. In addition, licensees will be required to assess the general fitness of each participant every four months and to make modifications to the individual's training regime, as necessary.

The minimum physical fitness training program needed to achieve the necessary fitness levels has been separated into two elements. The first element includes the training of individuals through cardiovascular training activities such as running, bicycling, rowing, swimming, or cross-country skiing. The individuals will be tested prior to assignment as a TRT member and each year thereafter using the performance criteria of a one-mile run in 8.5 minutes or less and a 40-yard dash starting from a prone position in 8.0 seconds or less. Likewise, armed response personnel and guards will be required to participate in the physical fitness training program. However, the performance criteria for these

Hence, the staff believes that these day firing criteria add no new burden. None the less, since there has been no direct licensee experience with these precise criteria, the NRC is requesting comment on their appropriateness.

Finding of no Significant Environmental Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that this rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment and therefore an Environmental Impact Statement is not required. The proposed amendments will ^{not adversely} affect ~~neither~~ the safety of the operations carried out by licensees possessing formula quantities of strategic special nuclear material ~~for~~ the routine release of, or exposures to, radioactivity. The amendments would: (1) specify annual performance testing criteria and a minimum physical fitness training program, and ensure that security force personnel can adequately perform their duties under conditions of strenuous tactical engagement; and (2) provide the same level of specificity and proficiency in the day firing weapons qualification criteria that is now present in the night firing criteria.

The environmental assessment and finding of no significant impact on which this determination is based is available for inspection at the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC. Single copies of the environmental assessment and finding of no

because the economic impact would be dominated by the existing requirements for physical security and nuclear material control and accounting. Thus, this rule does not fall within the purview of the act.

Backfit Analysis

The NRC has determined that the backfit rule, 10 CFR 50.109, does not apply to this proposed rule and, therefore, a backfit analysis is not required for this proposed rule, since these amendments do not involve any provisions which would impose backfits ~~as defined in 10 CFR 50.109~~ *of the types that are covered by* (a)(1).

List of Subjects in 10 CFR Part 73

Part 73 - Criminal Penalty, Hazardous materials-transportation, Incorporation by reference, Nuclear materials, Nuclear power plants and reactors, Penalty, 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.

NRC PROPOSES ADDITIONAL SAFEGUARDS REQUIREMENTS
FOR FUEL FACILITIES POSSESSING FORMULA
QUANTITIES OF STRATEGIC SPECIAL NUCLEAR MATERIAL

The Nuclear Regulatory Commission (NRC) is considering amending its regulations for certain nuclear fuel facilities to ensure that the facilities' security guards can adequately perform their duties. The revisions would require the guards to participate in a continuing physical fitness program, pass an annual performance test, and qualify for daytime weapons firing according to new criteria.

The physical fitness program would have to be approved by the NRC and ~~would be conducted three times a week, 45 minutes per session. The sessions~~ would include aerobic exercises such as running and bicycling, as well as exercises that develop strength, flexibility, and endurance in the major muscle groups. Guards, armed response personnel, and tactical response team members (the primary response team for security protection for each shift) would be evaluated once every four months to determine the effectiveness of the fitness training program.

To demonstrate physical fitness, guards, armed response personnel, and tactical response team members would be required to run certain distances within specified times. For tactical response team members, the criteria would be a one-mile run in 8 minutes and 30 seconds or less and a 40 yard dash starting from a prone position in 8.0 seconds or less. For response guards and armed response personnel who are not members of the tactical response team, the criteria would be a one-half mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less. Each individual would have to requalify once every 12 months.

The requirements for daytime weapons firing qualification would be updated and made similar to requirements for night firing issued in November 1988.

Interested persons are invited to submit written comments on the proposed changes by [Insert a date after the proposed rule is approved for publication]. They should be addressed to the Secretary of the Commission, Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.