

**North
Atlantic**

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The Northeast Utilities System

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October 17, 1994

Attention: Document Control Desk

Reference: Facility Operating License No. NPF-86, Docket No. 50-443

Subject: Request for Exemption from Certain Requirements of 10CFR73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Plant Reactors Against Radiological Sabotage" (TAC No. M90560)

Gentlemen:

Pursuant to 10CFR73.5, "Specific Exemptions," North Atlantic Energy Service Corporation (North Atlantic) requests an exemption from certain requirements of 10CFR73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage," for Seabrook Station. 10CFR73.55(d)(5) states in part "An individual not employed by the licensee but who requires frequent and extended access to protected and vital areas may be authorized access to such areas without escort provided that he receives a picture badge upon entrance into the protected area which must be returned upon exit from the protected area" As detailed below, the requested exemption will permit the implementation of an alternative unescorted access control system, the biometrics access control system, which will eliminate the need to issue and retrieve badges at the protected area entrance and exit locations and will allow all individuals; including licensee employees, contractors, NRC employees and others, with unescorted access, to retain possession of their badges when departing the protected area instead of returning them to Security when they exit the protected area.

North Atlantic proposes to implement a biometrics access control system, which utilizes hand geometry, to control unescorted access into the Seabrook Station protected area and believes that the standards of 10CFR73.5 are satisfied in this request. The exemption will result in enhanced protected area access control and is therefore beneficial to the health and safety of the public. Since the biometrics access control system will require the use of both a numbered picture badge and keycard (hereafter referred to as a badge), and a hand geometry system to enable unescorted access to the protected area, the proposed system will continue to provide a highly effective positive identification process. A badge that is lost, stolen or compromised outside the protected area, would not enable an unauthorized entry into the protected area.

BACKGROUND

10CFR73.55(a) states in part that "The licensee shall establish and maintain an onsite physical protection system and security organization which will have as its objective to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety."

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10CFR73.55(d), "Access Requirements, specifies in part that,

- (1) "Licensee shall control all points of personnel and vehicle access into a protected area."
- (5) "A numbered picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort. An individual not employed by the licensee but who requires frequent and extended access to the protected and vital areas may be authorized access to such areas without escort provided that he receives a picture badge upon entrance into the protected area which must be returned upon exit from the protected area..."

Currently, unescorted access into the Seabrook Station protected area is controlled through the use of a picture badge and a key card. Positive identification of personnel authorized and requesting access to the protected area is established by security personnel through a visual comparison of a picture badge and the individual requesting access. Badges are returned to Security when the individual exits the protected area and are stored and issued at the entrance/exit location.

The proposed system, will require each individual who is authorized unescorted access to have the physical characteristics of their hand (hand geometry) registered with their badge number in the biometrics access control system. Since no one can use a badge to gain access to the protected area except the individual whose hand geometry has been registered to that badge, individuals, including licensee employees, contractors, NRC personnel and others will be allowed to retain possession of their badges when they exit the protected area. All other access processes, including search function capability and access revocation, will remain the same. Since badges will be retained by the authorized individual, only the need to issue, retrieve and store badges at the entrance/exit station to the protected area will be eliminated. A Security officer responsible for access control will continue to be positioned within a bullet-resisting structure. The biometrics access control system will not be used for persons requiring escorted access (i.e. visitors).

North Atlantic believes that the basis for the wording in 10CFR73.55(d)(5), requiring individuals not employed by the licensee to receive and return their badges at the protected area entrance and exit, was to ensure that the badges could not be lost, stolen or compromised with the attendant risk that unauthorized persons could potentially enter the protected area. The proposed biometrics access control system will allow all individuals who are authorized unescorted access to the protected area to retain possession of their badges when they exit the protected area. It should be noted that even if a badge were to be lost, stolen or compromised access to the protected area by an unauthorized individual would not be enabled without the hand geometry of the individual registered to the badge. North Atlantic maintains that the proposed biometrics access control system will continue to provide for a highly effective means of identity verification that is at least equal to the existing process.

THE REQUIREMENTS OF 10CFR73.5 ARE MET

The standards set forth in 10CFR73.5 provide that specific exemptions may be granted if the proposed exemptions are:

- authorized by law,
- will not endanger life or property or the common defense and security, and
- are otherwise in the public interest.

North Atlantic has determined that the requested exemption to 73CFR73.55(d)(5) will not present an undue risk to the public health and safety, is consistent with the common defense and security and therefore, is authorized by law. North Atlantic believes that the remaining standards of 10CFR73.5 are demonstrated by the following discussion of how North Atlantic will continue to meet the General Performance Objective and Requirements of 10CFR73.55(a) after the exemption is granted.

10CFR73.55(a) specifies that the Commission may authorize a licensee to provide measures for protection against radiological sabotage other than those required by 10CFR73.55. This can be accomplished if the licensee demonstrates that:

- the measures have the same high assurance objective as specified in the regulation,
- that the overall level of system performance provides protection against radiological sabotage equivalent to 10CFR73.55 and meets the general performance requirements of 10CFR73.55.

These standards are satisfied as described below.

Assurance Objective

American National Standard, ANSI/ANS-3.3, "Security for Nuclear Power Plants," states in part that identification of individuals authorized access without escort can be accomplished by the use of "...a device that reads fingerprints, handprints, or some other unique physical feature." Under the proposed biometrics access control system, each individual who is authorized unescorted access to the protected area will have the physical characteristics of their hand registered with their badge. Visual identification of a picture badge will be replaced with a hand geometry system which provides for a non-transferrable means of identifying individuals, coupled with the use of a badge (keycard) reader. The current North Atlantic access control process for identifying individuals meets ANSI/ANS-3.3 criteria. The proposed biometrics access control system, as well, will meet the ANSI/ANS-3.3 identification criteria.

The biometrics access control system is superior to the current process because it provides for a non-transferrable means of identifying individuals, unlike photographs on a badge. During the registration process hand measurements will be made. These hand measurements form a template of the individual's hand (the hand geometry) which is stored for later use in the actual identification process. A registered individual will have to enter their badge into the card reader and place their hand on the measuring surface. The biometrics access control system will detect when the hand is properly positioned and then

will record an image. The unique characteristics are extracted from this image and are then compared with the previously stored template.

Therefore, the biometrics access control system will provide the same high assurance objective regarding onsite physical protection.

System Performance

The biometrics (hand geometry) equipment that North Atlantic proposes to install at Seabrook Station will meet the detection probability of 90% with a 95% confidence level. Testing conducted by Sandia National Laboratories (Sandia Report, "A Performance Evaluation of Biometric Identification Devices," SAND91-0276 UC-906 Unlimited Release, June 1991) demonstrated that hand geometry equipment possesses strong performance characteristics and is capable of meeting the proposed detection probability and confidence level. North Atlantic is planning to purchase the hand geometry equipment for the biometrics access control system from Recognition Systems Incorporated (RSI). The Seabrook Station equipment will be similar if not identical to RSI equipment that is currently in use at the Turkey Point and Palo Verde nuclear power plants. Based upon the Sandia testing, utility experience and on the Seabrook Station experience with the photo identification processes, North Atlantic believes that the proposed biometrics access control system will increase the reliability above that of the current system. North Atlantic will revise the security procedures to implement a testing program to ensure that the biometrics access control system will maintain this expected level of performance. Therefore, the biometrics access control system will continue to provide an overall level of performance equivalent to that specified in 10CFR73.55.

General Performance Requirement

The general performance requirement of 10CFR73.55(d)(1) is to ensure that the licensee controls all points of personnel access into the protected area. The proposed biometrics access control system will provide the same or greater level of assurance that access to the protected area by unauthorized individuals is prevented. North Atlantic will continue to control all points of personnel access into the protected area. In addition, all required access processes, including search function capability and access revocation, will remain the same. Only the processes required to issue, retrieve, and store badges at the protected area entrance and exit will be eliminated. Personnel will still be required to display their badges on the outer garment while in the protected area.

North Atlantic believes that the basis for the requirement in 10CFR73.55(d)(5), that requires non-licensee employees to return their badges when they exit the protected area is to ensure that the badges could not be lost, stolen or compromised and thus allowing unauthorized personnel to obtain access to the protected area. The proposed biometrics access control system will allow licensee employees, contractors, NRC personnel and others to retain their badges when they exit the protected area. The concern that a badge may be lost, stolen or compromised is essentially eliminated by requiring both the badge and the individual's unique hand geometry to be matched to enable access to the protected area. Thus a lost, stolen or compromised badge can not be used to gain access to the protected area without the matching hand geometry characteristics of the individual registered in the biometrics access control system computer. Therefore, implementation of the biometrics access control system will continue to meet the general performance requirements of 10CFR73.55(d)(5).

CONCLUSION

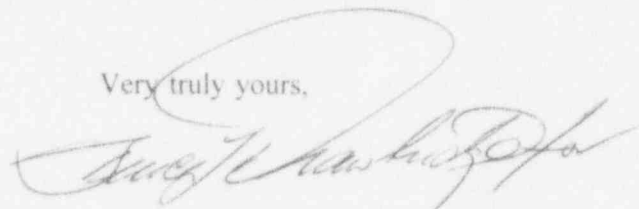
North Atlantic believes that the standards of 10CFR73.5 are satisfied. This exemption is necessary to permit implementation of an enhanced system to control unescorted access to the protected area. The biometrics access control system will eliminate the need to issue and retrieve badges at the protected area entrance and exit, allow all individuals with unescorted access to retain their badges when they exit the protected area and will still meet or exceed the requirements of 10CFR73.55.

This exemption request is essentially identical to exemptions granted to Florida Power and Light Company for Turkey Point, Baltimore Gas and Electric Company for Calvert Cliffs and Arizona Public Service Company for Palo Verde. North Atlantic estimates that implementation of the biometrics access control system will provide an annual savings of approximately \$280,000 due to the reduction of the security staff dedicated to issuing and collecting badges at the protected area entrance and exit. Therefore, North Atlantic believes that this request qualifies as a cost beneficial licensing action (CBLA).

The biometrics access control system is currently scheduled to be installed and operational by January 31, 1995. North Atlantic requests that this exemption be granted prior to that date.

Should you have any questions regarding this matter, please contact Mr. Terry L. Harpster, Director of Licensing Services, at (603) 474-9521, extension 2765.

Very truly yours,



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