



Boston Edison

Pilgrim Nuclear Power Station
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BECo Ltr. #95-067

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Docket No. 50-293
License No. DPR-35

**Request for Exemption from 10CFR73.55(d)(5); Requirements for
Physical Protection Against Radiological Sabotage**

Pursuant to 10CFR73.5, Boston Edison Company (BECo) requests an exemption from certain requirements of 10CFR73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage" for Pilgrim Nuclear Power Station. 10CFR73.55 (d)(5) states in part that an individual not employed by the licensee (i.e., contractors) may be authorized access to protected areas without escort provided the individual "receives a picture badge upon entrance into the protected area which must be returned upon exit from the protected area...". As detailed below, this exemption request will permit the implementation of an alternative unescorted access control system that would eliminate the need to issue and retrieve badges at the protected area entrance/exit locations and would allow all individuals, including licensee employees and contractors, with unescorted access to keep their badges with them when departing the site. An exemption from 10CFR73.55(d)(5) is required to permit contractors to take their badges offsite instead of returning them when exiting the protected area.

We propose to use a hand geometry biometrics system to control unescorted access into the Pilgrim protected area and believe the standards of 10CFR73.5, Specific Exemptions, are satisfied in this request. The exemption will indirectly result in benefits to the public from the enhanced site access control systems. Since the new access control system would require the use of both the badge and a hand geometry system to grant access into the protected area, the proposed system would continue to provide for a positive verification process. Potential loss of a badge by an individual, as a result of taking the badge offsite, would not enable an unauthorized entry into the protected area nor can the badge be used onsite if the verification process is circumvented.

We base this exemption request on a similar request granted to Baltimore Gas and Electric Company. Since we estimate an annual savings of approximately \$200,000 due to reducing the staff required to issue and retrieve picture badges, we believe this request meets the preliminary attributes of a cost beneficial licensing action. We, therefore, request the NRC prioritize this submittal accordingly.

BACKGROUND

10 CFR 73.55 (a) states,

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."

10 CFR 73.55(d), "Access Requirements", specifies 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 to Pilgrim is controlled through the use of a picture badge. Positive identification of personnel authorized and requesting access to the protected area is established by security personnel making a visual comparison of a picture badge and the individual requesting access. Badges are issued, stored, and retrieved at the entrance/exit location, and are not taken offsite.

Under the proposed system, each individual who is authorized unescorted access will have the physical characteristics of their hand (hand geometry) registered with their picture badge data in the access control system. Since no one can use a picture badge to gain access except the individual whose hand geometry has been registered to that badge, individuals (including contractors) will be allowed to keep their badge with them when they depart the site. All other access processes, including search function capability and access revocation, will remain the same. Since badges will be taken offsite, only the need to issue, retrieve and store badges at the entrance stations to the plant will be eliminated. A security officer responsible for access control will continue to be positioned within a bullet-resisting structure. This system would not be used for persons requiring escorted access (i.e., visitors).

We believe 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 entrance/exit, was to ensure that the badges could not be compromised or stolen by being taken offsite with a resulting risk that unauthorized persons could potentially enter the protected area. Under the proposed system, individuals not employed by the licensee and requiring frequent and extended access would be allowed to take their badges offsite. The badge and the hand geometry would be necessary for access into the protected area because a badge is deactivated when a person logs offsite. If a badge is compromised or stolen, site access would not be provided without the hand geometry of the person registered to the badge. We maintain the proposed system would continue to provide a combination of identity verification processes that are 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 which:

are authorized by law,

will not endanger life or property or the common defense and security, and

are otherwise in the public interest.

Boston Edison Company believes the activities to be conducted under this exemption are clearly authorized by law and are consistent with the common defense and security. We believe the remaining standards of 10CFR73.5 are demonstrated by the following discussion of how BECo will continue to meet the General Performance Objective and Requirements of 10CFR73.55(a) when the exemption is granted.

Title 10CFR73.55(a) specifies that the Commission may authorize an applicant or licensee to provide measures for protection for radiological sabotage other than those required by 10CFR73.55. This can be accomplished if the applicant or 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 the regulation; and

meets the general performance requirements of 10CFR73.55.

These standards are satisfied as described below.

High Assurance Objective

As discussed in American National Standard, ANSI/ANS-3.3, "Security for Nuclear Power Plants," 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 system, each individual who is authorized unescorted access will have the physical characteristics of their hand registered with their badge. Visual verification of a picture badge will be replaced with a hand geometry system which provides a non-transferable means of identifying people, coupled with the use of a badge reader. The current BECo access control process for identifying individuals meets ANSI/ANS-3.3 criteria. The proposed hand geometry access control process, as well, meets the ANSI/ANS-3.3 identification criteria.

The hand geometry system is superior to the current process because it provides a non-transferable means of identifying people, unlike photographs on a badge. During the registration process, hand measurements are made. This forms a template of the user's hand that is stored for later use in the actual verification process. The system detects when the hand is properly positioned and then records an image. The unique characteristics are extracted from this image and then compared with the previously stored template.

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

System Performance

Boston Edison Company proposes the hand geometry equipment selected 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 the hand geometry equipment possesses strong

performance characteristics and is capable of meeting the proposed detection probability and confidence level. Based on the results of the Sandia report and on experience gained at Pilgrim under the current photo-identification system, the false-accept rate for the hand geometry system is at least equal to the current system. The Physical Security Plan will be revised to allow licensee employees and contractors to take their badges offsite. Boston Edison Company will implement a process for testing the proposed system to ensure continued level of performance.

General Performance Requirement

The performance requirement of 10CFR73.55 (d)(1) is to ensure the licensee controls all points of personnel access into a protected area. Under the proposed system, Boston Edison Company will continue to control all points of personnel access into the protected area. All required access processes, including search function capability and access revocation, will remain the same. The processes required to issue, retrieve, and store badges at the protected area entrances/exits will be eliminated. Badges will continue to be displayed by all individuals while inside the protected area.

Implementation of the biometric access control system will continue to meet the general performance requirements of 10CFR73.55 (d)(5).

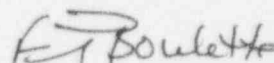
SCHEDULE

The biometric access control system is currently scheduled to be operational by September 1, 1995. We request that this exemption be granted prior to that date.

CONCLUSION

Boston Edison Company believes the standards of 10CFR73.5 are satisfied. This exemption is necessary to permit implementation of an enhanced unescorted access control system which would eliminate the need to issue and retrieve badges at protected area entrances/exits and allow all individuals with unescorted access to keep their badges with them when departing the site.

We have made no commitments in this letter. Should you have any further questions regarding this matter, we will be pleased to discuss them with you.


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ETB /MTL/nas/Rap95/Radiosab

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