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United States Nuclear Regulatory Commission
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Subject: Request for Exemption from 10CFR73.55(d)(5); Requirements for Physical Protection Against Radiological Sabotage

Ladies and Gentlemen:

Toledo Edison (TE) requests, in accordance with the provisions of 10CFR73.5, "Specific Exemptions," an exemption from certain requirements of 10CFR73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors Againct Radiological Sabotage" for the Davis-Besse Nuclear Power Station (DBNPS). Specifically, TE requests an exemption from certain requirements of 10CFR73.55(d)(5).

> This section, states in part, that "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."

This letter withdraws and supersedes the Request for Exemption from 10CFR73.55(d)(5) (Serial Number 2388) submitted by TE on June 28, 1996 and Information to Support a Request for Exemption from 10CFR73.55(d)(5) (Serial Number 2406) submitted on October 4, 1996.

Title 10 CFR73.55 states, in part, that "the licensee shall establish and maintain an on-site 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". Title 10 CFR73.55 (a) specifies that the commission may authorize an applicant or licensee to provide measures for protection against 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, and that the overall level of system performance provides protection against radiological sabotage equivalent to the regulation.



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This exemption is requested to allow the use of a hand geometry biometric system to control unescorted access into the Protected Area of the DBNPS, in conjunction with allowing individuals authorized unescorted access, including contractors, to take the Protected/Vital Area badge offsite.

The DBNPS Industrial Security Plan (ISP), Hand Geometry Changes, Revision 15, Appendix B, approved on December 5, 1996 and submitted to the Nuclear Regulatory Commission (NRC) in accordance with the requirements of 10CFR50.54(p) on January 20, 1997 (Serial Number 2432) details the changes to the ISP affected by the exemption request.

Current Access Control System:

Currently, unescorted access into DBNPS is controlled through the use of a photo badge and keycard (throughout the discussion the combination of the photo badge and keycard will be referred to as a "badge"). Security officers issuing badges compare the photograph on the badge with the individual requesting access. Under the current system, badges are not taken offsite and are issued, stored and retrieved at the bullet-resisting structure of the Personnel Processing Facility (PPF).

Proposed Access Control System:

Under the proposed system, each individual who is authorized unescorted access to the DBNPS will have the physical characteristics of their hand (hand geometry) registered with their badge number in the Security Data Management System (SDMS). Since no one can use a badge to gain access except the individual whose hand geometry has been registered to that badge, individuals (this also includes individuals not employed by the licensee e.g., contractors) will be allowed to keep their badge with them when they exit the Protected Area and depart the site. All other access processes, including search functions will remain the same except for elimination of the process to issue, retrieve and store badges in the bullet-resisting structure. Individuals requiring escorted access to the facility will have a visitor badge issued and retrieved at the bullet-resisting structure. At least one security officer responsible for access control will continue to be positioned within the bullet-resisting structure to provide assistance as necessary.

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, multiple hand measurements are made with the results being averaged into a single template of the user's hands. This template is stored for later use in the actual verification process. A registered user enters his/her badge into the card reader and places their hand on the measuring surface. The system detects when the hand is properly positioned and records the image. The unique characteristics are extracted from this image and then compared with the previously stored template within the SDMS.

Based on the results of the SANDIA REPORT entitled, "A Performance Evaluation of Biometric Identification Devices" (SAND91-0276 UC-906 Unlimited Release, Printed June, 1991) regarding biometrics systems and on experience gained at other utilities utilizing the current photo-identification system, the false-accept rate for the hand geometry system is at least equal to the current system. The ISP, Appendix B defines the methodology and acceptance

criteria for testing the system to ensure that the sensitivity of the system is maintained at an appropriate level. As stated above, all other access processes will remain the same except for elimination of the process to issue, retrieve and store badges in the bullet/resisting structure.

Basis For Exception:

The purpose of 10CFR73.55(d) is to control all points of personnel access into a protected area. Under the proposed system, badges would be encoded with an identification number, facility code, and site code and would be allowed to be taken offsite. However, both the badge and the hand recognition would be necessary for access into the Protected Area. The actual recognition and verification of the individual is accomplished by the SDMS. Even if a badge could be compromised or stolen, the fact remains that access would not be accomplished without the hand geometry of the person registered to the badge. The proposed system would continue to provide for a combination of identity and verification processes and would increase the level of access control at the DBNPS.

Based on the above, direct application of the regulation [10CFR73.55(d)] in this particular circumstance is not necessary to achieve the underlying purpose of the regulation and the overall level of system performance will provide protection against radiological sabotage.

This exemption is also being submitted to the NRC as a Cost Beneficial Licensing Action (CBLA). This change will not adversely impact safety but could possibly improve the protection of the public health and safety by permitting flexibility in reassigning security officers inside the power block for increased effectiveness of armed response. This represents a potential savings of approximately $4,000,000 over the DBNPS's remaining operating life cycle.

In order to facilitate the effective planning of the DBNPS Operational Safeguards Response Evaluation review and the Security computer replacement project, Toledo Edison requests that the NRC approve this exemption by April 18, 1997.

Should you have any questions or require additional information, please contact Mr. James L. Freels, Manager - Regulatory Affairs, at (419) 321-8466.

Very truly yours,

for J Kilbourne

DLM/dlc

cc: A. B. Beach, Regional Administrator, NRC Region III
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