



Consumers  
Power

**POWERING  
MICHIGAN'S PROGRESS**

Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

April 4, 1996

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

**DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT**  
REQUEST FOR EXEMPTION FROM 10 CFR 73.55 REGARDING BIOMETRIC HAND  
GEOMETRY ACCESS SYSTEMS

The purpose of this letter is to request exemption from the requirements of 10 CFR 73.55(d)(5), which requires that individuals not employed by the licensee receive a photo identification badge before entry into the protected area which must be returned upon exit from the protected area. It is requested that this exemption request be processed as a Cost Beneficial Licensing Action.

This exemption is requested in view of our planned installation and use of a biometric hand geometry system to control unescorted access into the protected area of the Palisades Plant. That system will allow the photo identification badge to be taken offsite by individuals not employed by Consumers Power Company. The proposed exemption is expected to provide a cost savings of approximately \$140,000 per year. NRC approval of similar exemption requests was the subject of NRC letters dated December 21, 1995, for Virgil C. Summer Unit 1; December 15, 1995, for Donald C. Cook Units No. 1 and No. 2; December 26, 1995, for Zion Units No. 1 and No. 2; and November 1, 1995, for Indian Point Units No. 1 and No. 2.

Based on the guidelines in 10 CFR 73.5, Consumers Power Company concludes that the requested exemption is justified based on the attached information. Therefore, Consumers Power Company requests a permanent exemption which will remain in affect throughout the remaining operating life of the Palisades Nuclear Plant.

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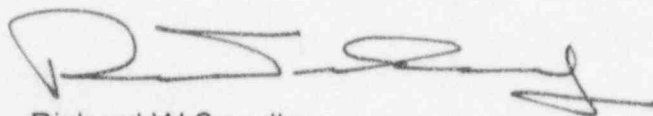
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Attachment 1 contains the basis for the exemption request. The cost benefit licensing analysis is contained in Attachment 2.

We plan to implement a hand geometry based access control system prior to the next refueling outage, currently scheduled for November 1996. Consequently, Consumers Power Company requests favorable consideration of the proposed exemption request by the end of the third quarter of 1996.

### SUMMARY OF COMMITMENTS

This letter contains no new commitments and no revisions to existing commitments.

A handwritten signature in black ink, appearing to read 'R. Smedley', with a long horizontal stroke extending to the right.

Richard W Smedley  
Manager, Licensing

CC Administrator, Region III, USNRC  
Project Manager, NRR, USNRC  
NRC Resident Inspector - Palisades

Attachments

**ATTACHMENT 1**

**CONSUMERS POWER COMPANY  
PALISADES PLANT  
DOCKET 50-255**

**REQUEST FOR EXEMPTION FROM 10 CFR 73.55  
REGARDING BIOMETRIC HAND GEOMETRY ACCESS SYSTEMS**

## **PRESENT REQUIREMENTS**

Palisades Nuclear Power Plant requests exemption from requirements of 10 CFR 73.55(d)(5), in accordance with the provisions of 10 CFR 73.5, "Specific Exemptions." Specifically, 10 CFR 73.55(d)(5) states, "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...."

10 CFR 73.55 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 73.5 specifies that the Commission may authorize an applicant or licensee to provide measures for protection against radiological sabotage other than those required by 10 CFR 73.55. 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 the overall level of the system performance provides protection against radiological sabotage equivalent to the regulation and meets the general performance requirements of the regulation.

## **REASON FOR EXEMPTION**

This exemption is requested to allow persons who are not employed by Consumers Power Company to take their photographic identification badges offsite. This exemption is requested in conjunction with the installation and use of a biometric hand geometry system to control unescorted access into the protected area of the Palisades Nuclear Plant.

## **CURRENT SYSTEM**

Unescorted access into Palisades Nuclear Plant is controlled through the use of a photograph on a keycard badge (herein termed "keycard"). Security officers at each entrance use the photograph on the keycard to identify the individual requesting access. Under the current system, keycards are not taken offsite and are issued, stored and retrieved at the entrance/exit location(s) to the protected area.

Positive identification of personnel authorized for and requesting access to the protected area is established by security personnel making a visual comparison of a picture keycard and the individual requesting access.

## **PROPOSED SYSTEM**

Each individual who is authorized unescorted access will have the physical characteristics of their hand (hand geometry) registered with their keycard number in the access control system.

During the registration process, hand measurements are made. This forms a template of the user's hand which is stored for later use in the actual verification process. A registered user enters his/her keycard into the card reader and places the hand on the measuring surface. 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.

Since no one can use a keycard to gain access except the individual whose hand geometry has been registered to that keycard, individuals (this also includes individuals not employed by the licensee, i.e., contractors) will be allowed to keep their keycard with them when they depart the site. Keycards do not carry any information other than a unique identification number. All other access processes, including search function capability, will remain the same except for elimination of the process to issue, retrieve and store keycards at the entrance/exit to the protected area. At least one member of the security organization will continue to be positioned within a bullet resisting structure to be responsible for control of the portal which allows access to the protected area. This system would not be used for persons requiring escorted access, i.e., visitors.

## **JUSTIFICATION**

The performance requirement of 10 CFR 73.55(d)(1) is to ensure that the licensee controls all points of personnel access into a protected area. Under the proposed system, Palisades Nuclear Plant will continue to control all points of personnel access into the protected area. Palisades Nuclear Plant believes the basis for the wording in 10 CFR 73.55(d)(1), regarding individuals not employed by the licensee having to receive and return their badges at the entrance/exit, was to ensure that the keycards could not be compromised when taken offsite. Therefore, as a result of such a compromise, 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 keycards offsite. However, both the keycard and hand geometry would be necessary for access into the protected area and, if a badge were to be compromised or stolen, access would not be provided without the hand geometry of the person registered to the badge. The proposed system continues to provide for a combination of identity verification processes. The hand geometry system is superior to the current process because it provides a nontransferable means of identifying people, unlike photographs on a keycard.

At least one member of the security organization will continue to be positioned within a bullet resisting structure to be responsible for control of the portal which allows access to the protected area. Also in accordance with 10 CFR 73.55 a numbered keycard identification system will continue to be used for all individuals who are authorized access to protected areas without escorts. Keycards will continue to be displayed by all individuals while inside the protected area.

As discussed in American National Standard Institute, 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, hand prints, 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 keycard will be replaced with a hand geometry system which provides a nontransferable means of identifying people, coupled with the use of a keycard reader. The current Palisades Nuclear Plant access control process for identifying individuals meets the ANSI/ANS-3.3 criteria. The proposed hand geometry access control process, also meets the ANSI/ANS-3.3 identification criteria.

The hand geometry equipment selected for use at Palisades Nuclear Plant will meet the detection probability of 90% with a 95% confidence level in accordance with Regulatory Guide 5.44. Implementation of the hand geometry system will continue to provide the overall level of performance equivalent to that which is called for in 10 CFR 73.55 and the general performance requirements of 10 CFR 73.55(d)(5).

Based on a Sandia report entitled, "A Performance Evaluation of Biometric Identification Devices" (SAND91-0276 UC-906 Unlimited Release, Printed June 1991), and our experience with the current photo-identification system, Palisades Nuclear Plant expects that the hand geometry system will enhance the overall effectiveness of the security program.

Based on the above discussions, the biometric access control system will satisfy the same high assurance objective regarding onsite physical protection, is not inimical to the common defense and security, and does not constitute an unreasonable risk to the public health and safety. Therefore, Consumers Power Company requests approval of this exemption in order to implement the biometric hand geometry system at the Palisades Plant.

## SECURITY PLAN REVISIONS

The following specific issues will be addressed in the Security Plan and implementing procedures following approval of the exemption request:

- Line supervision and tamper capabilities
- Testing of equipment
- Compensatory measures for failed equipment
- Status of the keycard outside the protected area
- Lost keycards
- Exiting the protected area via locations other than the Security Control Center
- Visitor keycards/badges
- Recovery of keycards upon involuntary termination

**ATTACHMENT 2**

**CONSUMERS POWER COMPANY  
PALISADES PLANT  
DOCKET 50-255**

**REQUEST FOR EXEMPTION FROM 10 CFR 73.55  
REGARDING BIOMETRIC HAND GEOMETRY ACCESS SYSTEMS**

**COST BENEFIT LICENSE ANALYSIS**



### Regulatory Requirement

10 CFR 73.55 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 public health and safety".

### Effect of Requirement

Currently, unescorted access into the Palisades Nuclear Plant is controlled through the use of a photograph on a keycard badge (herein termed "keycard"). Security officers at each entrance use the photograph on the keycard to identify the individual requesting access. Under the current system, keycards are not taken offsite and are issued, stored, and retrieved at the entrance/exit location(s) to the protected area. The identification, issuance and retrieval of the keycard is time consuming.

### Rationale for Regulatory Change

10 CFR 73.55 specifies that the Commission may authorize a licensee to provide measures for protection against radiological sabotage other than those required by 10 CFR 73.55. This can be accomplished if the licensee demonstrates that the measures satisfy the same high assurance objective as specified in the regulation, and the overall level of the system performance provides protection against radiological sabotage equivalent to the regulation and meets the general performance requirements of the regulation.

This exemption is requested to allow the use of a biometric hand geometry system to control unescorted access into the protected area of the Palisades Nuclear Plant, in conjunction with allowing photographic identification of badges/keycards issued to persons not employed by the licensee to be taken offsite.

### Approximate Cost of Requirement:

The security officer time allotted to the current program costs approximately \$140,000 per year. Therefore, over the remaining 14 years of plant life, the savings would be approximately \$1,960,000.