



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001
December 15, 1994

50-259/260
50-296/50-327
50-328/50-390
50-391

Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: EXEMPTION FROM CERTAIN REQUIREMENTS OF 10 CFR 73.55, REQUIREMENTS FOR PHYSICAL PROTECTION OF LICENSED ACTIVITIES IN NUCLEAR POWER PLANT REACTORS AGAINST RADIOLOGICAL SABOTAGE - SEQUOYAH, BROWNS FERRY, AND WATTS BAR NUCLEAR PLANTS (TAC NOS. M90724, M90725, M90726, M90727, M90728, M90729, M90730)

Dear Mr. Kingsley:

The Commission has issued the enclosed exemption from certain requirements of 10 CFR 73.55 relating to issuance, storage and retrieval of badges for personnel who have been granted unescorted access to the protected and vital areas of the site. This exemption is related to your application dated October 24, 1994, which requested exemption from the requirements of 10 CFR 73.55(d)(5) that requires an individual not employed by the licensee, but who requires frequent and extended access to protected and vital areas, to be authorized access to these areas without an escort provided he receives a picture badge upon entrance into the protected area that must be returned upon exit from the protected area. Specifically, the exemption allows implementation of a hand geometry biometrics system for site access control at the Brown Ferry, Sequoyah, and Watts Bar Nuclear Plants such that photograph identification badges may be taken offsite by individuals not employed by the Tennessee Valley Authority.

A copy of the exemption is being forwarded to the Office of the Federal Register for publication.

It is recognized that the implementation schedule will be different at each plant, subject to the completion of modifications, procedure changes, and training at each plant. The staff requests that you submit revisions to the Physical Security Plan for the Browns Ferry and Sequoyah plants within 60 days

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Mr. O. Kingsley

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of implementation in accordance with 10 CFR 50.54(p). For Watts Bar, the staff requests the submittal 60 days prior to fuel load, currently scheduled by TVA to occur in March 1995.

Sincerely,

Original signed by

Frederick J. Hebdon, Director
Project Directorate II-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-259, 50-260, 50-296,
50-327, 50-328, 50-390
and 50-391

Enclosure: Exemption

cc w/enclosure: See next page

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Mr. Oliver D. Kingsley, Jr.
Tennessee Valley Authority

BROWNS FERRY
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WATTS BAR

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BROWNS FERRY
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WATTS BAR

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Docket
SQN Rdg.
WBN Rdg.
BFN Rdg.
B. Clayton

DOCKET NO. 50-327, 50-328, 50-259, 50-260
50-296, 50-390 and 50-391

FROM: Office of Nuclear Reactor Regulation

SUBJECT: EXEMPTIONS FROM CERTAIN REQUIREMENTS OF 10 CFR 73.55, REQUIREMENTS FOR PHYSICAL PROTECTION OF LICENSED ACTIVITIES IN NUCLEAR POWER PLANT REACTORS AGAINST RADIOLOGICAL SABOTAGE

- ☐ Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- ☐ Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s):
Time for submission of Views on Antitrust matters.
- ☐ Notice of Consideration of Issuance of Amendment to Facility Operating License. (Call with
30-day insert date).
- ☐ Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's
Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice
of Opportunity for Hearing.
- ☐ Notice of Availability of NRC Draft/Final Environmental Statement.
- ☐ Notice of Limited Work Authorization.
- ☐ Notice of Availability of Safety Evaluation Report.
- ☐ Notice of Issuance of Construction Permit(s).
- ☐ Notice of Issuance of Facility Operating License(s) or Amendment(s).
- ☐ Order.
- ☒ Exemption.
- ☐ Notice of Granting Exemption.
- ☐ Environmental Assessment.
- ☐ Notice of Preparation of Environmental Assessment.
- ☐ Receipt of Petition for Director's Decision Under 10 CFR 2.206.
- ☐ Issuance of Final Director's Decision Under 10 CFR 2.206.
- ☐ Other:

Attachment(s): As stated

Contact: D. Wills
Telephone: 504-2024

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	
Tennessee Valley Authority)	
Sequoyah Nuclear Plant)	
Units 1 and 2)	Docket Nos. 50-327 and 50-328
Browns Ferry Nuclear Plant)	
Units 1, 2, and 3)	Docket Nos. 50-259, 260 and 296
Watts Bar Nuclear Plant)	
Units 1 and 2)	Docket Nos. 50-390 and 391

EXEMPTION

I.

The Tennessee Valley Authority (TVA or the licensee) is the holder of Facility Operating License Nos. DPR-33, DPR-52, DPR-68, DPR-77, DPR-79 for the Browns Ferry Nuclear Plant Units 1, 2 and 3 (BFN) and the Sequoyah Nuclear Plant Units 1 and 2 (SQN), respectively. For the Watts Bar Nuclear Plant Units 1 and 2 (WBN), TVA is the holder of Construction Permits CPPR-91 and CPPR-92, respectively, since Operating Licenses have not been issued. The licenses provide, among other things, that the licensee is subject to all rules, regulations, and orders of the Commission in effect now and hereafter.

The facilities consist of two pressurized water reactors at Sequoyah Nuclear Plant Units 1 and 2, located in Soddy Daisy, Tennessee; three boiling water reactors at Browns Ferry Nuclear Plant, Units 1, 2 and 3, located in Limestone County, Alabama; and two pressurized water reactors under construction at Watts Bar Nuclear Plant, Units 1 and 2, located at TVA's site on the west bank of the Tennessee River approximately 50 miles northeast of Chattanooga, Tennessee.

II.

Title 10 CFR 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage," paragraph (a), in part, states 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."

10 CFR 73.55(d), "Access Requirements," paragraph (1), specifies that "The licensee shall control all points of personnel and vehicle access into a protected area." 10 CFR 73.55(d)(5) requires that "A numbered picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort." 10 CFR 73.55(d)(5) also states 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..."

TVA has proposed to implement an alternative unescorted access control system that would eliminate the need to issue and retrieve badges at each entrance/exit location and would allow all individuals with unescorted access to keep their badges with them when departing the site.

An exemption from 10 CFR 73.55(d)(5) is required to allow contractors who have unescorted access to take their badges offsite instead of returning them when exiting the site. By letter dated October 24, 1994, TVA requested an exemption from the requirements of 10 CFR 73.55(d)(5) for this purpose.

III.

Pursuant to 10 CFR 73.5, "Specific exemptions," the Commission may, upon application of any interested person or upon its own initiative, grant such exemptions in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest. Pursuant to 10 CFR 73.55, the Commission may authorize a licensee to provide alternative measures for protection against radiological sabotage provided the licensee demonstrates that the alternative measures have "the same high assurance objective" and meet "the general performance requirements" of the regulation, and "the overall level of system performance provides protection against radiological sabotage equivalent" to that which would be provided by the regulation.

Currently, unescorted access into the protected areas at the operating TVA plants is controlled through the use of a photograph on a badge/keycard (hereafter, referred to as "badge"). The security officers at each entrance station use the photograph on the badge to visually identify the individual requesting access. The badges for both TVA employees and contractor personnel who have been granted unescorted access are issued upon entrance at each entrance/exit location and are returned upon exit. The badges are stored and are retrievable at each entrance/exit location. In accordance with 10 CFR 73.55(d)(5), contractors are not allowed to take these badges offsite.

Under the proposed biometric system, each individual who is authorized unescorted entry into protected areas would have the physical characteristics of his/her hand (i.e., hand geometry) registered, along with his/her badge number, in the access control system. When a registered user enters his/her badge into the card reader and places his/her hand onto the measuring surface,

the system detects that the hand is properly positioned, and records the image. The unique characteristics of the hand image is then compared with the previously stored template in the access control computer system corresponding to the badge to verify authorization for entry.

Individuals, including TVA employees and contractors, would be allowed to keep their badge with them when they depart the site and, thus, eliminate the need to issue, retrieve and store badges at the entrance stations to the plant. Badges do not carry any information other than a unique identification number. All other access processes, including search function capability, would remain the same. This system would not be used for persons requiring escorted access; i.e., visitors.

Based on a Sandia report entitled, "A Performance Evaluation of Biometrics Identification Devices" (SAND91--0276 UC--906 Unlimited Release, Printed June 1991), and on its experience with the current photo-identification system, TVA determined that the false-accept rate for the hand geometry system will be at least equal to the current photo-identification system in use at the TVA plants. The biometric system has been in use for a number of years at several sensitive Department of Energy facilities and, recently, at nuclear power plants.

TVA will implement a process for testing the proposed system to ensure continued overall level of performance equivalent to that specified in the regulation. When the changes are implemented, the respective Physical Security Plans will be revised to include implementation and testing of the hand geometry access control system and to allow TVA employees and contractors to take their badges offsite.

When implemented, TVA will control all points of personnel access into a protected area under the observation of security personnel through the use of a badge and hand geometry verification system. The numbered picture badge identification system will continue to be used for all individuals who are authorized unescorted access to protected areas. Badges will continue to be displayed by all individuals while inside the protected area.

Since both the badge and hand geometry would be necessary for access into the protected area, the proposed system would provide a positive verification process. The potential loss of a badge by an individual as a result of taking the badge offsite would not enable an unauthorized entry into protected areas.

IV.

For the foregoing reasons, pursuant to 10 CFR 73.55, the NRC staff has determined that the proposed alternative measures for protection against radiological sabotage meet "the same high assurance objective," and "the general performance requirements" of the regulation and that "the overall level of system performance provides protection against radiological sabotage equivalent" to that which would be provided by the regulation.

Accordingly, the Commission has determined that, pursuant to 10 CFR 73.5, an exemption is authorized by law, will not endanger life or property or common defense and security, and is otherwise in the public interest. Therefore, the Commission hereby grants an exemption from those requirements of 10 CFR 73.55(d)(5) relating to the returning of picture badges upon exit from the protected area such that individuals not employed by TVA, i.e., contractors, who are authorized unescorted access into the protected areas at the Browns Ferry, Sequoyah, and Watts Bar Nuclear Plants can take their badges offsite.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not result in any significant adverse environmental impact (59 FR 61351).

For further details with respect to this action, see the request for exemption dated October 24, 1994, which is available for public inspection at the Commission's Public Document Room, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Athens Public Library, South Street, Athens, Alabama (for the BFN Plant), and at the Chattanooga-Hamilton County Library, 1101 Broad Street, Chattanooga, Tennessee 37402 (for the SQN and WBN Plants).

This exemption is effective upon issuance. It is expected to be implemented for each plant separately when modifications, procedures, and training are completed at the respective plant.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by

Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 15th day of December 1994

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