

November 22, 1994

Mr. Oliver D. Kingsley, Jr.  
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Chief Nuclear Officer  
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SUBJECT: ENVIRONMENTAL ASSESSMENT OF REQUEST FOR 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, AND M90730)

Dear Mr. Kingsley:

Enclosed is a copy of an "Environmental Assessment and Finding of No Significant Impact" for your information. This assessment relates to TVA's letter 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 requested exemption will allow implementation of a hand geometry biometrics system for site access control at the Browns 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.

The assessment is being forwarded to the Office of the Federal Register for publication.

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

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Enclosure: Environmental Assessment

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UNITED STATES NUCLEAR REGULATORY COMMISSION  
BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3  
DOCKET NOS. 50-259, 50-260, AND 50-296  
SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2  
DOCKET NOS. 50-327 AND 50-328  
WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2  
DOCKET NOS. 50-390 AND 50-391  
ENVIRONMENTAL ASSESSMENT AND  
FINDING OF NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from certain requirements of its regulations to Facility Operating License Nos. DPR-33, DPR-52, DPR-68, DPR-77, DPR-79. These licenses were issued to the Tennessee Valley Authority (TVA) for operation of the Browns Ferry Nuclear Plant Units 1, 2 and 3 (BFN) located in Limestone County, Alabama, and the Sequoyah Nuclear Plant Units 1 and 2 (SQN) located in Soddy Daisy, Tennessee. In addition, by this action, the Commission is considering issuing a similar exemption to TVA's Watts Bar Nuclear Plant Units 1 and 2 (WBN) located at TVA's site on the west bank of the Tennessee River approximately 50 miles northeast of Chattanooga, Tennessee. Operating licenses have not been issued for WBN; they are currently under Construction Permits CPPR-91 and CPPR-92, for Units 1 and 2 respectively.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action:

The proposed action is in accordance with the TVA's application dated October 24, 1994, for exemption from certain requirements of 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power

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Reactors Against Radiological Sabotage." The exemption would allow implementation of a hand geometry biometrics system to control site access at BFN, SQN, and WBN so that photograph identification badges for non-TVA employees who have been granted unescorted access into protected and vital areas may be taken offsite.

The Need for the Proposed Action:

Pursuant to 10 CFR 73.55, paragraph (a), TVA shall establish and maintain an onsite physical protection system and security organization. Regulation 10 CFR 73.55(d), "Access Requirements," paragraph (1), specifies that "licensee shall control all points of personnel and vehicle access into a protected area." Regulation 10 CFR 73.55(d)(5) specifies that, "A numbered picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort." Regulation 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...."

Currently, unescorted access into protected areas of BFN and SQN (with plans to establish a similar system at WBN) plants is controlled through the use of a photograph on a badge/keycard (hereafter referred to as a "badge"), which is stored at the access point when not in use. 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 given to the individuals at the entrance location upon entry and are returned upon exit. In accordance with 10 CFR 73.55(d)(5), the badges are not allowed to be taken offsite.

TVA proposes to implement an alternative unescorted access control system which would eliminate the need to issue and retrieve badges at the entry point 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 permit contractors to take their badges offsite instead of returning them when exiting the site.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of TVA's application. Under the proposed system, each individual who is authorized unescorted access would have the physical characteristics of their hand (hand geometry) registered with their badge number in the access control system. When an individual enters the badge into the card reader and places the hand on the measuring surface, the system would record the individual's hand image. The unique characteristics of the hand image would be compared with the previously stored template 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.

Based on a Sandia report entitled "A Performance Evaluation of Biometric Identification Devices" (SAND91--0276-UC-906 Unlimited Release, Printed June 1991), and on its experience with the current photo-identification system, TVA demonstrated that the proposed hand geometry system would provide enhanced site access control. 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. Potential loss of a badge by an individual, as a result of taking the badge offsite, would not enable unauthorized entry into protected areas. TVA will implement a process for periodically testing the proposed system to ensure continued overall level of performance equivalent to that specified in the regulation. The Physical

Security Plans for all plants 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.

TVA has determined that the proposed hand geometry access control process for identifying personnel meets the American National Standard ANSI/ANS-3.3, "Security for Nuclear Power Plants" criteria. It will provide the same high assurance objective regarding onsite physical protection as provided by the photo-identification process now in use.

The access process will continue to be under the observation of security personnel. A numbered picture badge identification system will continue to be used for all individuals who are authorized access to protected areas without escorts. Badges will continue to be displayed by all individuals while inside the protected area.

Accordingly, the Commission concludes that this proposed action would result in no significant radiological environmental impact. With regard to potential non-radiological impacts, the proposed action does not affect non-radiological plant effluents and has no other environmental impact. Therefore, the Commission concludes that there are no significant non-radiological environmental impacts associated with the proposed action.

Alternative to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action. Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action did not involve the use of any resources not previously considered in the Final Environmental Statements related to operation of the Browns Ferry Nuclear Plant, dated September 1, 1972; the Sequoyah Nuclear

Plant, dated February 13, 1974; or the Watts Bar Nuclear Plant, dated December 1978.

Agencies and Persons Consulted:

The NRC staff consulted with the State of Tennessee and Alabama regarding the environmental impact of the proposed action.

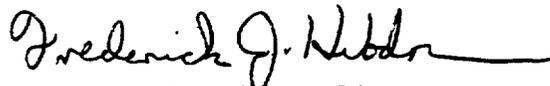
FINDING OF NO SIGNIFICANT IMPACT

The Commission has determined not to prepare an environmental impact statement for the proposed exemption. Based upon the foregoing environmental assessment, the Commission has concluded that the proposed action will not have a significant effect on the quality of the human environment.

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; at the local public document room located at the Athens Public Library, South Street, Athens, Alabama (for the Browns Ferry Nuclear Plant); and at the Chattanooga-Hamilton County Library, 1101 Broad Street, Chattanooga, Tennessee 37402 (for the Sequoyah Nuclear Plant and the Watts Bar Nuclear Plant).

Dated at Rockville, Maryland, this 22nd day of November 1994.

FOR THE NUCLEAR REGULATORY COMMISSION



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**BROWNS FERRY  
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**BROWNS FERRY  
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