



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

ENCLOSURE

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
EXEMPTION FROM CONTAINMENT POSTING REQUIREMENTS OF 10 CFR 73.55(d)(8)

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1 AND 3

DOCKET NOS. 50-259 AND 50-296

1.0 Introduction

By letter dated September 2, 1993, the Tennessee Valley Authority (the licensee) requested an exemption from the frequent access control requirements of 10 CFR 73.55(d)(8) for Browns Ferry Nuclear Plant (BFN) Units 1 and 3. On December 2, 1993, the NRC staff requested additional information regarding this request, which the licensee provided on December 17, 1993. The licensee is requesting an exemption from requirements for posting containment, during periods of frequent access, with a guard or watchman to ensure that only authorized personnel and material enter the containment. The exemption will apply only until immediately before fuel is loaded into the respective reactors.

2.0 EVALUATION

The general performance objectives and requirements of 10 CFR 73.55(a) specify that the physical protection program shall provide high assurance that activities involving special nuclear materials are not hazardous to the common defense and security and do not constitute an unreasonable risk to the public health and safety.

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 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 alternate measures for protection against radiological sabotage provided the licensee demonstrates that the alternate 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.

The licensee states that BFN Units 1 and 3 have been shut down since March 1985, and have been defueled since September 1985 and February 1987, respectively. Since the reactors are defueled, the radiological hazard potential within the containment is significantly reduced. Consequently, the potential for radiological sabotage is also significantly reduced. The

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licensee will maintain all other elements of the BFN physical security plan. Therefore, granting the exemption does not create a potential new radiological hazard during the period of the exemption.

The effects of postulated latent sabotage, which could affect operations after the reactors are refueled, must also be addressed. The licensee states that it will perform extensive return-to-service testing on all safety-related systems. This testing ensures that plant components can properly perform their intended design functions. After modifications are completed, the licensee will also perform security inspections to detect sabotage or introduction of foreign material, such as explosives, which may have occurred during the recovery effort. Therefore, there is reasonable assurance that latent sabotage will be detected and will not create a radiological hazard after the reactors have returned to service.

The licensee's application also discusses measures such as access authorization controls, criminal background checks, and fitness for duty verification. The staff finds that these measures are consistent with minimum compliance with the regulations, and do not constitute compensatory actions or circumstances which justify granting the exemption. However, the reactor conditions and return-to-service tests and inspections discussed above provide an adequate assurance of radiological security.

### 3.0 Conclusion

The staff finds that granting the proposed exemption until the reactors are refueled provides the same high level of assurance, meets the general performance requirements, and provides an equivalent level of protection as the existing regulations that radiological sabotage will not result in offsite doses in excess of the guidelines of 10 CFR Part 100 for the duration of the exemption. The staff also finds that the licensee's security inspections and performance of system return-to-service testing programs provides similar assurance for plant operations after refueling. Therefore, the proposed exemption from the frequent containment access control requirements of 10 CFR 73.55(d)(8) for BFN Units 1 and 3 may be granted until immediately before refueling of the respective units.

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Dated: February 1, 1994