February 21, 2002

Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 — ISSUANCE OF AMENDMENT REGARDING SPENT FUEL POOL COOLING ANALYSIS METHODOLOGY CHANGE (TAC NOS. MB1807 AND MB1884)

Dear Mr. Scalice:

The Commission has issued the enclosed Amendment No. 37 to Facility Operating License No. NPF-90 for Watts Bar Nuclear Plant, Unit 1. This amendment is in response to your application of April 20, 2001, as supplemented on October 29, 2001, and November 14, 2001, requesting an amendment to the Final Safety Analysis Report (FSAR) and the licensing bases for Watts Bar Nuclear Plant, Unit 1. This amendment changes the spent fuel pool (SFP) cooling analysis methodology to increase the evaluated heat removal capacity of the SFP cooling system and addresses Tritium Production Program Interface Issues 8, 9, 11, and 12.

A copy of our Safety Evaluation is enclosed. Notice of issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

L. Mark Padovan, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosures: 1. Amendment No. 37 to NPF-90
2. Safety Evaluation

cc w/enclosures: See next page

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TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-390

WATTS BAR NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 37
License No. NPF-90

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated April 20, 2001, as supplemented on October 29, 2001, and November 14, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, changes to the Watts Bar Unit 1 Updated Final Safety Analysis Report (UFSAR) that reflect a revised spent fuel pool (SFP) cooling analysis methodology to increase the evaluated heat removal capacity of the SFP cooling system, as described in the NRC safety evaluation dated February 21, 2002, are authorized. The licensee shall submit the update of the UFSAR authorized by this amendment in accordance with 10 CFR 50.71(e).

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Project Licensing Management
Office of Nuclear Reactor Regulation

Date of Issuance: February 21, 2002

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 37 TO FACILITY OPERATING LICENSE NO. NPF-90

TENNESSEE VALLEY AUTHORITY

WATTS BAR NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-390

1.0 INTRODUCTION

Tennessee Valley Authority's (TVA's or the licensee's) letter of April 20, 2001, as supplemented on October 29, 2001, and November 14, 2001, submitted a request for changes to the Watts Bar Nuclear Plant, Unit 1 (WBN), Updated Final Safety Analysis Report (UFSAR). The supplemental letters provided clarifying information that was within the scope of the initial notice and did not change the initial proposed no significant hazards consideration determination. The requested changes would revise the spent fuel pool (SFP) cooling analysis methodology to increase the evaluated heat removal capacity of the SFP Cooling and Cleanup System (SFPCCS). This change in SFP heat removal capacity would give TVA the capability to off-load the core for refueling as early as 100 hours after shutdown. It also would compensate for the projected increase in SFP decay heat load associated with the following Tritium Production Program Interface Issues addressed in NUREG-1672 "Safety Evaluation Report (SER) Related to the Department of Energy's Topical Report on the Tritium Production Core":

- Issue 8 — Station Service Water System
- Issue 9 — Ultimate Heat Sink
- Issue 11 — SFP Cooling and Cleanup System
- Issue 12 — Component Cooling Water System

2.0 EVALUATION

The NRC staff and its contractor Brookhaven National Laboratory evaluated TVA's license amendment request of April 20, 2001. TVA's request included the following three enclosures:

1) Enclosure 1: Proposed Methodology Change Description and Evaluation of the Proposed Change
2) Enclosure 2: UFSAR Markups
3) Enclosure 3: NUREG-1672 Interface Item Responses

The NRC staff's evaluation follows.

ENCLOSURE

2.1 Review of Enclosure 1 “Proposed Methodology Change Description and Evaluation of the Proposed Change”

2.1.1 SFPCCS Capability to Cool the SFP

The SFPCCS at WBN is designed to remove the decay heat generated by stored spent fuel assemblies, and clarify and purify the water in the SFP and connected components. The cooling portion of the system, the SFP cooling system, consists of two seismic category I cooling trains, each equipped with one heat exchanger and one pump. A third pump serves as a backup to the pump in either train. The component cooling system (CCS) removes heat from the SFP heat exchangers.

TVA’s current U.S. Nuclear Regulatory Commission (NRC)-approved SFP cooling analysis, which was prepared to support the previously licensed re-rack effort, established 32.6 MBTU/hr as the bounding heat load for planned and unplanned outages. It also set 159.24 °F as the maximum bulk water temperature in the SFP with only one train of SFP cooling system operating. TVA performed an outage-specific decay heat analysis as part of this amendment request to determine the acceptable point in time that the core off-loading activities may commence without exceeding the design basis maximum allowable heat load of 32.6 MBTU/hr. This method ensures that the maximum SFP water temperature will not exceed 159.24 °F.

In its letter of April 20, 2001, TVA proposed to change its SFP cooling analysis methodology to increase the maximum allowable SFP decay heat load up to a maximum of 47.4 MBTU/hr. TVA proposed to take credit for lower CCS water temperatures and lower SFP heat exchanger fouling factors to justify the 14.8 MBTU/hr increase. The licensee’s current analysis uses design fouling factors of 0.0005 hr*ft^{2}*°F/BTU for both the tube and shell side fouling, and design maximum CCS temperatures of 95 °F for the cooling water on the shell side of the SFP heat exchangers. However, based on over 20 years of data on fouling in uncleaned heat exchangers from TVA’s Sequoyah Nuclear Plant, TVA stated that the actual fouling had been found to be considerably less than design. It was also noted that the CCS maximum design temperature of 95 °F was very conservative relative to the actual amount of heat being rejected to the CCS. The design basis for the CCS included significantly higher decay heat loads based on residual heat removal (RHR) system heat loads shortly after shutdown. However, by the time the core is completely off-loaded, the decreasing decay heat from the fuel has been transferred to the SFP cooling system and the RHR heat load is essentially zero. Additionally, plant operators can decrease the CCS temperature to values less than 95 °F by increasing essential raw cooling water (ERCW) flow to the CCS heat exchanger.

TVA’s proposed revised SFP cooling method uses the same basic methodology, equations, and data as the current analysis, but takes credit for the additional heat removal capacity obtained from the lower fouling factors and CCS temperatures.

The revised methodology varied both the SFP heat exchanger fouling and CCS temperature to perform thermal balances on the SFP. TVA performed several analyses of SFP thermal performance at varying fouling factors from 0.0005 to 0.0001 hr*ft^{2}*°F/BTU and varying CCS temperatures from 95 °F to 80 °F. From this, TVA developed a series of curves which showed allowable decay heat vs. CCS temperature and SFP heat exchanger fouling factor. The result

showed that a single train of the SFP cooling system could remove 47.4 MBTU/hr of decay heat from the SFP under the following conditions:

- SFP cooling system heat exchanger shell and tube side fouling factor of 0.0001
- CCS temperature of 80 ^{o}F
- maximum bulk SFP water temperature of 159.24 ^{o}F

Under otherwise identical conditions, operation of both trains of the SFP cooling system could remove the same decay heat with the SFP at a bulk water temperature of 129.30 ^{o}F.

NRC staff finds that TVA's proposed revised methodology regarding the maximum SFP temperature is acceptable. The revised methodology uses the same basic method, equations and data as the current analysis. Thus, the revised methodology is essentially equivalent to the current method and maintains the currently NRC-approved maximum temperature of the SFP water. The proposed revised methodology incorporates the use of actual, rather than conservative, values for SFP cooling system heat exchanger fouling factors and CCS temperatures.

2.1.2 Increase in SFP Heat Load

TVA proposed to increase the maximum allowable decay heat in the WBN SFP from 32.6 MBTU/hr to 47.4 MBTU/hr. TVA would use up to 13.8 MBTU/hr of the additional 14.8 MBTU/hr heat removal capability to begin its full core offload operation as early as 100 hours after shutdown. The remaining 1 MBTU/hr would provide an allowance for increased decay heat from Tritium Production Program NUREG-1672 Interface Issues 8, 9, 11, and 12.

As previously mentioned, TVA currently uses outage-specific decay heat values to determine when core off-loading activities may start without exceeding the design basis maximum allowable SFP heat load of 32.6 MBTU/hr. TVA's proposed revised method uses similar procedures as the current method to determine when to begin the core off-loading activities without exceeding the maximum allowable SFP heat load. However, TVA determined the maximum allowable decay heat load by using the curves in the graph described above based on the actual SFP cooling system heat exchanger fouling factors and CCS temperature. The decay heat value included a margin to account for inaccuracy in reading graphs. The licensee stated that WBN would exceed the lower design value of 32.6 MBTU/hr only after considering actual fouling of the SFP cooling system heat exchanger, and by taking credit for actual CCS temperature. In its letter of October 29, 2001, TVA stated that WBN will develop plant procedures to determine the heat exchanger fouling and maximum expected CCS temperature. Initially, WBN would collect and analyze data from the CCS and SFP systems to determine heat exchanger fouling. Then, over a period of several outages, WBN would determine fouling based on the established trend. TVA also stated that WBN would provide operator guidance and training relating essential raw cooling water (ERCW) temperature to the highest expected CCS temperatures during refueling outage activities to ensure maximum SFP temperatures are not exceeded.

WBN's SFP cooling system can accommodate residual heat from Tritium Production Program activities since the current and proposed revised analyses are primarily overall system heat balances. WBN operators can adjust the time to begin core off-loading after shutdown for refueling until the design allowable heat load removal rate can accommodate core and residual

decay heat. The staff concludes that the SFP cooling system can accommodate the additional decay heat load imposed by beginning core off-load as early as 100 hours after shutdown. In addition, the SFP cooling system can accommodate the projected increase in SFP heat load from irradiated tritium-producing burnable absorber rods.

WBN's UFSAR states that WBN operates enough SFP cooling equipment and controls the rate of fuel transfer to assure that the SFP temperature does not exceed a limit of 150 °F during anticipated refueling activities. The SFP analyses indicate that WBN will need to operate both trains of SFP cooling to maintain SFP temperature below this limit at the increased decay heat load. Having a backup pump capable of operating in either train provides additional assurance that two trains of SFP cooling will be available. For the increased heat load, the existing cooling system satisfies the requirements of General Design Criterion 61 of Title 10, Code of Federal Regulations (10 CFR) Part 50, Appendix A, with respect to providing residual heat removal capability with reliability reflecting its importance to safety.

2.1.3 Effect of SFP Boiling

TVA also provided the results of analyses to evaluate the minimum time to SFP boiling and the maximum rate of coolant inventory loss due to boiling. The analyses assumed the proposed maximum decay heat load of 47.4 MBTU/hr and used conservative assumptions. The conservative assumptions included no reduction in decay and residual heat over time and no heat loss through other heat transfer mechanisms. In the unlikely event that there is a complete and sustained loss of cooling, the minimum time to SFP boiling decreased from 5.24 hours for the current method to 3.4 hours, and the maximum rate of inventory loss increased from 70.2 gallons per minute (gpm) to 102 gpm.

Sections 9.1.3.5.1 and 9.1.3.5.4 of Watts Bar's UFSAR show that there is instrumentation in the SFP to measure the temperature of the water and to give local indication as well as annunciation in the control room when normal temperatures are exceeded. Also, the SFP has instrumentation which gives an alarm in the control room when the water level in the SFP reaches either a high or low-level condition.

In TVA's letter of October 29, 2001, the licensee listed various sources of makeup water and makeup rates. This information identified multiple sources of makeup water which exist with sufficient flow rates, all of which can be aligned to the SFP in less than 1 hour. The makeup water sources include the following:

- refueling water storage tank (RWST) via two refueling purification pumps rated at 200 gpm
- Demineralized Water Head Tank via system static head
- fire protection system at a minimum of 55 gpm
- primary water storage tank via 150 gpm rated pumps

All piping, valves, and pumps from the RWST to the SFP cooling loop are seismically qualified and the fire protection system is a seismic category I system.

The staff concludes that the increase in SFP heat load is acceptable based on the capability to identify a loss of cooling and initiate adequate makeup water flow from any of several reliable sources prior to the onset of SFP boiling. These capabilities are consistent with the

requirements of General Design Criterion 61 of 10 CFR Part 50, Appendix A, with respect to providing a makeup system capable of preventing a significant reduction in SFP coolant inventory under accident conditions.

2.2 Review of Enclosure 2 “UFSAR Markups”

TVA provided marked-up UFSAR pages to show its proposed changes. These markups showed the following:

- Changed the maximum SFP decay heat load shown in UFSAR Sections 9.1.3.1.1 and 9.1.3.3.1 which can be placed on the SFP cooling system within specific limitations on the SFP cooling heat exchanger fouling and CCS temperatures less than the design CCS temperature of 95 °F. The proposed revision discussed decay heat curves provided to allow outage-specific variation in maximum SFP decay heat load based on known values of SFP heat exchanger fouling factors and CCS temperatures. These changes are consistent with the proposed changes discussed in Section 2.1.2, and are, therefore, acceptable once the procedures for operators to determine the fouling factors and CCS temperatures are in place.

- Changed the maximum rate of water loss in the SFP specified in UFSAR Section 9.1.3.3.1 in the event that cooling capability was lost for an extended period and SFP water would begin to boil. Based on the review discussed in Section 2.1.3, the staff finds this change acceptable. In the same UFSAR section, the licensee also modified a sentence regarding the capability of a fire protection system hydrant located near SFP to provide the makeup water. The staff also finds this change acceptable, since multiple sources of makeup water exist with sufficient flow rates that can be aligned to the SFP in less than 1 hour, as discussed in Section 2.1.3.

- Inserted a sentence regarding maintaining a margin to localized boiling in UFSAR Section 9.1.3.3.1. Since a margin to localized boiling is maintained, no review was necessary.

- Replaced Table 9.1-1 with a new table, which included the results of the case with the maximum decay heat of 47.4 MBTU/hr. This change is acceptable since the contents of the additional information in the table are consistent with the results reviewed in Section 2.1.

The staff has reviewed the licensee’s proposed revisions to the WBN UFSAR and finds each to be consistent with the proposed modification to the SFP analysis methodology, reviewed and approved in Section 2.1.

2.3 Review of Enclosure 3 “NUREG-1672 Interface Item Responses”

2.3.1 Interface Issue 8 — Station Service Water System

The design basis function of the station service water system, which is called the ERCW System at WBN, includes providing a cooling loop for heat removal from the CCS. The ERCW supplies water from the ultimate heat sink (UHS) to cool the CCS. The CCS intermediate cooling loop, in turn, provides a heat sink to the SFP cooling system and the RHR system.

The licensee's analysis showed the impact of the tritium production core (TPC) on core heat loads was an increase of approximately 0.3 MW (1 MBTU/hr) based on conservative, full pool SFP conditions. The estimated heat load included both the decay heat generated by freshly discharged fuel assemblies during a refueling outage and the additional residual decay heat from the increased discharge rate of fuel assemblies into the pool.[1]

The licensee's analysis for the revised SFP cooling method, which uses reduced SFP heat exchanger fouling factors and lower CCS temperature, was provided in TVA's letter of April 20, 2001. This analysis showed that the SFP cooling heat rejection to the SFPCCS would increase by approximately 14.8 MBTU/hr (1 MBTU/hr attributable to the TPC and 13.8 MBTU/hr attributable to earlier start of core offloads). However, the latter portion of the decay heat (i.e., 13.8 MBTU/hr) did not represent additional heat load on the CCS or ERCW, because it was decay heat shifted from the RHR system to the SFPCCS (both of which are cooled by CCS and ERCW) as a result of earlier start of core offload.

In TVA's letter of October 29, 2001, the licensee indicated that the net increase of 1 MBTU/hr of decay heat due to the TPC was well within the design basis limiting heat load imposed on the ERCW. The nominal design heat load of the ERCW is 236 MBTU/hr. The estimated maximum overall heat load on the ERCW is 163 MBTU/hr including the additional heat load due to the proposed change. Licensee analysis showed that the increase of 1 MBTU/hr of decay heat due to the TPC produced less than 0.1 °F increase in the UHS temperature.

Based on the above, the staff concludes that the ERCW system has adequate cooling capacity and margin to perform its safety and non-safety functions with the additional heat loads imposed by TPC activities and that Tritium Production Program activities will not have an adverse impact on the ERCW heat removal capabilities.

2.3.2 Interface Issue 9 — Ultimate Heat Sink

The design basis function of the UHS (the Tennessee River) is to provide an uninterrupted source of cooling water for decay heat removal. The ERCW system supplies water from the UHS to primarily cool safety-related components, including the CCS. The CCS intermediate cooling loop provides a heat sink to the SFP cooling and RHR systems.

As discussed in Section 1.5.8 of TVA's letter of April 20, 2001, the net increase in decay heat associated with the TPC was approximately 1 MBTU/hr. The additional increase in the decay heat load to the SFPCCS was decay heat shifted from the RHR system to the SFPCCS as a result of earlier start of core offload and does not represent a net increase in CCS heat load on the UHS. TVA's letter of October 29, 2001, in response to the NRC's request for additional information (RAI) of October 2, 2001, indicated that the net increase of 1 MBTU/hr of decay heat due to the TPC was well within the design basis limiting heat load imposed on the ERWS and UHS (since the ERCW delivers water from UHS, the capacity of the ERCW is equivalent to that of UHS). The nominal limiting design heat load of the UHS is 236 MBTU/hr and the estimated maximum overall heat load on the UHS is 163 MBTU/hr including the additional heat

[1] Increased discharge rate means a tritium production core with 96 fresh fuel assemblies rather than a tritium production core with 80 fresh fuel assemblies.

load due to the proposed change. TVA's analysis showed that the increase of 1 MBTU/hr of decay heat due to the TPC produced less than 0.1 $^{\circ}$F increase in the UHS temperature.

Based on the above, NRC staff determined that the UHS has adequate cooling capacity and margin to perform its safety and non-safety functions with the additional heat loads imposed by TPC activities and that Tritium Production Program activities will not have an adverse impact on the UHS heat removal capabilities.

2.3.3 Interface Issue 11 — SFP Cooling and Cleanup System

TVA's change in the SFP cooling analysis methodology (Section 2.1) increases the maximum allowable SFP decay heat load up to a maximum of 47.4 MBTU/hr from previous limit of 32.6 MBTU/hr. TVA took credit for lower CCS water temperatures and lower SFP heat exchanger fouling factors to do this. The licensee proposed this change so that it would have the capability to off-load the core during outages as early as 100 hours after shutdown and compensate for the projected increase in SFP decay heat from Tritium Production Program activities.

Based on the review discussed in Section 2.1, the staff concludes the following:

- The SFPCCS has adequate capacity and cooling margin to perform its safety and non-safety functions with the additional heat loads imposed by Tritium Production Program activities
- The SPFCCS has adequate reliability to accommodate the additional SFP heat loads imposed by the proposed change to allow the start of core off-loads as early as 100 hours, consistent with improved SFP heat exchanger fouling and CCS temperature.

2.3.4 Interface Issue 12 — Component Cooling Water System

The design basis function of the CCS includes providing an intermediate cooling loop for heat removal from several safety-related heat exchangers and several non-safety-related components. Two of the highest heat loads placed on the CCS include the SFPCCS and RHR systems. These two heat removal systems are the primary means for cooling the plant and removing residual decay heat during later stages of plant cooldown and during outages.

TVA's analysis showed the increase in heat load from the TPC was approximately 0.3 MW (1 MBTU/hr) based on conservative, full pool SFP conditions. The estimated heat load included both the decay heat generated by freshly discharged fuel assemblies during a refueling outage and the additional residual decay heat from the increased discharge rate of fuel assemblies into the pool.

The licensee discussed its analysis with an revised method for the SFP cooling, which used reduced SFP heat exchanger fouling factors and lower CCS temperature in Section 1.5.11 of TVA's letter of April 20, 2001. As previously mentioned, this analysis showed that the total increase in allowable decay heat to the SFPCCS is approximately 14.8 MBTU/hr (1 MBTU/hr attributable to the TPC and 13.8 MBTU/hr attributable to earlier core offloads). However, the latter portion of the decay heat (i.e., 13.8 MBTU/hr) did not represent additional heat load on the CCS. This is because it was decay heat shifted (as a result of earlier start of core-offload)

from the RHR system to the SFPCCS, both of which were cooled by CCS. The shifting resulted from the fuel being either in the core (cooled by RHR system) or in the SFP (cooled by the SFPCCS). The staff found that there was no net increase in heat load on the CCS for this portion of increased decay heat.

In TVA's letter of October 29, 2002, TVA indicated the following:

- the net increase of 1 MBTU/hr of decay heat due to the TPC was well within the design bases limiting heat load imposed on the CCS
- the nominal limiting design heat load of the CCS is 120 MBTU/hr
- the estimated maximum overall heat load on the CCS is 56.2 MBTU/hr

The decay heat load increase is less than 1% of the total design heat load on the CCS.

Based on the above, the NRC staff concludes that the CCS has adequate cooling capacity and margin to perform its safety and non-safety functions with the additional heat loads imposed by tritium production activities, and that Tritium Production Program activities will not have an adverse impact on the CCS heat removal capabilities.

2.4 Summary

The NRC staff concludes that the revised methodology proposed by TVA is acceptable to evaluate the increased heat removal capability of the SFP cooling system when conservative design values for SFP cooling system heat exchanger fouling factors and CCS temperature are replaced by actual measured values. The staff finds that TVA established an acceptable method of ensuring that the increased decay heat resulting from Tritium Production Program activities and a reduction in the time to initiate core offload to as few as 100 hours after shutdown remains within the capability of the SFP cooling system for SFP temperatures within its licensing basis. Finally, the staff concludes that the design capacity and reliability of the SFP cooling system, the ERCWS, the UHS, the CCS, and the SFP makeup water systems are adequate for the increased decay heat resulting from Tritium Production Program activities and a reduction in the time to initiate core offload to as few as 100 hours after shutdown. Since the proposed FSAR revisions adequately describe these capabilities and actions, the proposed FSAR amendment is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Tennessee State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding

(66 FR 64998). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: February 21, 2002

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