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SUBJECT: Requests notice of enforcement discretion for Unit 1 TS
 3.9.6, "Refueling Machine."

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Arizona Public Service Company
PALO VERDE NUCLEAR GENERATING STATION
P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

102-03344-JML/BAG/KR
May 1, 1995

JAMES M. LEVINE
VICE PRESIDENT
NUCLEAR PRODUCTION

U.S. Nuclear Regulatory Commission
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Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket No. STN 50-528
Request for Notice of Enforcement Discretion**

Arizona Public Service Company (APS) hereby requests a Notice of Enforcement Discretion for Unit 1 Technical Specification (TS) 3.9.6, "Refueling Machine."

TS Limiting Condition for Operation (LCO) 3.9.6 states:

"The refueling machine shall be used for movement of fuel assemblies and shall be OPERABLE with:

- a. A minimum capacity of 3590 pounds and an overload cut off limit of less than or equal to 1600 pounds for the refueling machine."

and the ACTION states:

"With the above requirements for the refueling machine not satisfied, suspend use of the refueling machine from operations involving the movement of fuel assemblies."

APS is requesting the NRC to exercise discretion by not enforcing compliance with the requirement of TS LCO 3.9.6 in Unit 1 while up to an additional 200 pound increase in the current overload cut-off limit of 1600 pounds is applied to free a stuck fuel assembly. Unit 1 is currently in it's fifth refueling outage performing the Cycle 6 reload. The refueling machine is currently unable to insert the fuel assembly into core location E-12. The fuel assembly became stuck at approximately 0030 MST on April 30, 1995, when an attempt was made to insert it into the core. If the Enforcement Discretion is granted for TS LCO 3.9.6, Unit 1 will attempt to release the stuck fuel

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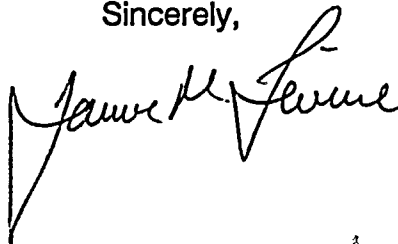
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assembly by applying the 200 pound overload cut-off increase setpoint in 50 pound increments.

The Plant Review Board has reviewed this request for a Notice of Enforcement Discretion and determined that the requested increase in the overload cut-off limit for TS LCO 3.9.6 does not constitute an unreviewed safety question or create a nuclear safety hazard.

Should you have any questions, please contact Burton A. Grabo, Section Leader, Nuclear Regulatory Affairs, at (602) 393-6492.

Sincerely,

A handwritten signature in cursive script, appearing to read "James H. Lawrence".

JML/BAG/KR

Enclosure 1: Request for Notice of Enforcement Discretion for TS LCO 3.9.6

cc: L. J. Callan
K. E. Perkins
K. E. Johnston
B. E. Holian
A. V. Godwin (ARRA)

ENCLOSURE 1

REQUEST FOR NOTICE OF ENFORCEMENT DISCRETION

FOR TS LCO 3.9.6

Description of the Condition:

On Sunday, April 30, 1995, at approximately 0030 MST, during the Unit 1 Cycle 6 reload, APS refueling personnel were not able to fully insert a fuel assembly in core location E-12 (see Figure 1), as indicated by an underload condition. An unsuccessful attempt was made then to remove the assembly from E-12. Visual examination revealed that the assembly in core location F-12 had not been positioned properly and apparently, movement of the E-12 assembly is prevented by the F-12 assembly.

APS Engineering personnel have determined that the apparent root cause of the stuck assembly in core location E-12 is a misaligned fuel assembly in core location F-12. The assembly in core location F-12 is apparently not seated on the lower core support plate pins. There are currently fuel assemblies in core locations D-12 and E-11 also, effectively boxing in on three sides the fuel assembly located in E-12. With the assembly in F-12 misaligned at the lower core support plate, during the attempt to lower an assembly into E-12, the refueling machine received an underload condition at 378.3-inches (401.7-inches is the fully inserted position). During the withdrawal attempt, the refueling machine received an overload condition at 371-inches. Currently, the fuel assembly in core location E-12 is still grappled onto the refueling machine at approximately 371-inches inserted.

At the request of APS, ABB-CE has reviewed the current situation in order to assist APS in its effort to free the fuel assembly lodged in Unit 1 core location E-12. CE has recommended that the overload setpoint on the refueling machine be set up in 50 pound increments to 1800 pounds (200 pounds above its current setting of 1600 pounds). At each of the increased overload cut-off setpoints, attempts should be made to withdraw the stuck assembly.

Safety Basis

The purpose of the refueling machine overload cut-off limit in TS LCO 3.9.6 is to ensure that the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations.

Justification for Increase in the Overload Cut-off Limit:

The 1800 pound load is well below the fuel assembly design basis of sustaining a 5000 pound axial load applied at the upper end fitting. This 200 pound increase is intended to overcome any frictional forces preventing the assembly in E-12 from being withdrawn from the core. The increase of 200 pounds to the overload cut-off limit may result in damage to fuel assembly grid strap(s), however, damage to the fuel rods is not expected.

Compensatory Actions:

An attempt will be made to view by video the interface between the F-12 and the E-12 assemblies prior to attempting withdrawal of assembly E-12 to minimize any damage to the assembly. This examination will also provide additional data which can be used to expedite any subsequent mechanical integrity evaluations.

The following steps will be taken prior to and during withdrawal of the assembly in Unit 1 core location E-12:

1. The assembly in location F-12 be restrained to prevent movement while E-12 is being removed from the core.
2. The new 1800 pound overload setpoint will be reached in 50 pound increments.

If attempts to withdraw the assembly at the 1800 pound setpoint are not successful, pulling will cease and an evaluation will be performed prior to any further attempts.

Although the SYSTEM 80 fuel assembly design basis is to sustain a 5000 pound axial force on the upper end fitting, any attempt to withdraw an assembly above the refueling machine overload cut-off setpoint has the potential to damage the grid straps of that assembly and any adjacent assemblies. Therefore, a thorough visual examination of assemblies E-11, D-12, E-12, and F-12 be performed following withdrawal of the assembly to insure that the mechanical integrity of the fuel assemblies and the fuel rods contained therein is maintained.

During the attempts to withdraw the stuck assembly, personnel access to containment will be limited. In addition, appropriate management oversight will be maintained.

Duration of the Request:

The Notice of Enforcement Discretion will be in effect until the fuel assembly in core location E-12 has been successfully withdrawn.

Consequences to the Environment:

APS has determined that the requested Notice of Enforcement Discretion involves no change in the amount or type of radiological effluent that may be released offsite, and that there is no increase in individual or cumulative occupational radiation exposure. As such, operation of Unit 1 in accordance with the proposed enforcement discretion does not involve an unreviewed environmental safety question.

No Significant Hazards Consideration Determination

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed temporary change allows an increase of the overload cut-off limit from 1600 pounds to 1800 pounds. This change has been reviewed by APS and ABB-CE personnel during the development of this request, and previously when a similar event occurred in Unit 1 during core reload in November, 1989. The proposed change is expected to allow APS to remove a stuck fuel assembly from core location E-12. APS is currently analyzed for a design basis fuel handling accident inside containment which is described as the dropping of a single fuel assembly during fuel handling. Since the fuel assembly is designed for a 5000 pound axial load applied at the upper end fitting, the application of a load of up to 1800 pounds does not increase the probability of dropping a single fuel assembly. Additionally, since the misaligned assembly in core location F-12 will be restrained prior to attempting to free the assembly in core location E-12, there will not be an increased probability of damage to the F-12 assembly. Since it is not expected that any damage will occur to fuel rods from the increased force on the assembly, the consequences of an accident previously evaluated will not be increased. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed temporary change to the overload cut-off does not introduce any new modes of plant operation or new accident precursors, involve any physical alterations to plant configurations, or make any changes to system setpoints which could initiate a new or different kind of accident. The proposed change does not affect the design or performance characteristics of the refueling machine or the fuel assembly. No new failure modes have been defined nor new system interactions introduced for any plant system or component, nor has any new limiting failure been identified as a result of the proposed changes. The configuration and use of the refueling machine will be maintained as described in CESSAR 9.1.4.2.2.1 and 9.1.4.3.4.b. The machine is designed for manual operation and the machine will be operated to place a fuel assembly into a safe location. This change involves the operation of the refueling machine outside the bounds of TS LCO 3.9.6. The hoist load will be increased beyond that normally allowed in order to overcome the frictional forces between affected adjacent fuel assemblies. The allowed load is well within the acceptable axial fuel assembly load described in the Updated FSAR 4.2.3.1.5.B. The consequences of a fuel handling accident as previously analyzed, bound any possible malfunction during this evolution. The only possible equipment that could malfunction are the fuel assembly and the refueling machine. The malfunction of this equipment has been previously analyzed. This change is

intended to allow APS to remove a stuck fuel assembly from core location E-12. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Under the proposed temporary change, the refueling machine will remain capable of performing its safety function. The change does not affect the design or performance of the refueling machine or the fuel assembly, but will allow APS to remove a stuck fuel assembly from core location E-12. The worst case fuel handling accident as previously evaluated, remains the limiting event even with the use of the increased overload cut-off setpoint. The margin of safety will not be reduced since one of the primary reasons for the setpoint is to prevent damage to the core internals and the pressure vessel. The fuel assemblies are designed to be able to withstand a 5000 pound vertical force without damage. The increase of 200 pounds is insignificant. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

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