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Waterford 3

W3F1-94-0132
A4.05
PR

August 19, 1994

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Waterford 3 SES
Docket No. 50-382
License No. NPF-38
Technical Specification Change Request NPF-38-157

Gentlemen:

The attached description and safety analysis support a change to the Waterford 3 Technical Specifications (TS).

The proposed change modifies the Waterford 3 TS by relocating the requirements of specification 3/4.3.4 Turbine Overspeed Protection from the TS pursuant to the NRC Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors.

The proposed change has been evaluated in accordance with 10CFR50.91(a)(1) using criteria in 10CFR50.92(c) and it has been determined that the proposed change involves no significant hazards considerations. The Plant Operations Review and Safety Review Committees have reviewed and accepted the proposed change based on the evaluation mentioned above.

The circumstances surrounding this request, as discussed below, are such that your expeditious review is respectfully requested.

In NUREG 1366, "Improvements to Technical Specifications Surveillance Requirements," dated December 1992, the NRC Staff recommended that where the turbine manufacture agrees, the turbine valve testing frequency should be changed from monthly to quarterly. In early 1993 Waterford 3 contacted

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Westinghouse Electric Corp. (the Waterford 3 turbine manufacture) in an effort to obtain an agreement to extend the monthly turbine valve test. Unfortunately, Westinghouse was unable to accommodate this request until just recently. Currently, Westinghouse is conducting an analysis (should be completed by early September 1994) to extend the Waterford 3 turbine valve testing interval. Westinghouse was able to provide preliminary results that indicate that the analysis will support the reduced turbine valve test frequency.

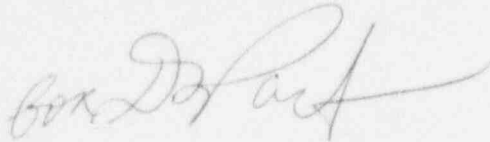
Waterford 3 is especially concerned with turbine valve testing for the remainder of Fuel Cycle 7 due to increased Dose Equivalent Iodine (DEI) in the Reactor Coolant System (RCS). Shortly after start-up following Refuel 6, a small amount of DEI was observed in the RCS indicating the presence of a fuel leak. The observed DEI is well below the Technical Specification limit. However, turbine valve testing requires a reduction in power. Waterford 3 reduces power to 90% for turbine valve testing which causes a DEI spike in the RCS. During the last test at Waterford 3 in July 1994, DEI increased by a factor of 2.5 (see attached figure) before returning to approximately the previous level by Chemical Volume Control System (CVCS) purification. RCS activity spikes such as these result in the potential for increased personnel exposure, increased radioactive wastes, and increases in the plant's contaminated areas. Additionally, Waterford 3 is interested in minimizing unnecessary transients that could worsen the condition of the fuel.

Waterford 3 will conduct turbine valve testing as required this Saturday, August 20, 1994. Precautions will be taken such as installing new resin beds and reducing DEI in the RCS (through the use of 2 charging pumps) to as low as possible prior to the test. Turbine valve testing will not be required for another 38 days or until September 27, 1994 (i.e., TS 31 day surveillance requirement plus 25%). If this proposed change is approved by September 27, 1994 the turbine valve test interval extension can be implemented with the completed Westinghouse analysis via 10 CFR 50.59.

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Should you have any questions or comments concerning this request, please contact Paul Caropino at (504)739-6692.

Very truly yours,



R.P. Barkhurst
Vice President, Operations
Waterford 3

RPB/PLC/ssf
Attachment: Affidavit
NPF-38-157
Reference List

cc: L.J. Callan, NRC Region IV
D.L. Wigginton, NRC-NRR
R.B. McGehee
N.S. Reynolds
NRC Resident Inspectors Office
Administrator Radiation Protection Division
(State of Louisiana)
American Nuclear Insurers

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of)
)
Entergy Operations, Incorporated) Docket No. 50-382
Waterford 3 Steam Electric Station)

AFFIDAVIT

D.F. Packer, being duly sworn, hereby deposes and says that he is General Manager, Plant Operations - Waterford 3 of Entergy Operations, Incorporated; that he is duly authorized to sign and file with the Nuclear Regulatory Commission the attached Technical Specification Change Request NPF-38-157; that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.



D.F. Packer
General Manager, Plant Operations -
Waterford 3

STATE OF LOUISIANA)
) ss
PARISH OF ST. CHARLES)

Subscribed and sworn to before me, a Notary Public in and for the Parish and State above named this 19TH day of AUGUST, 1994.

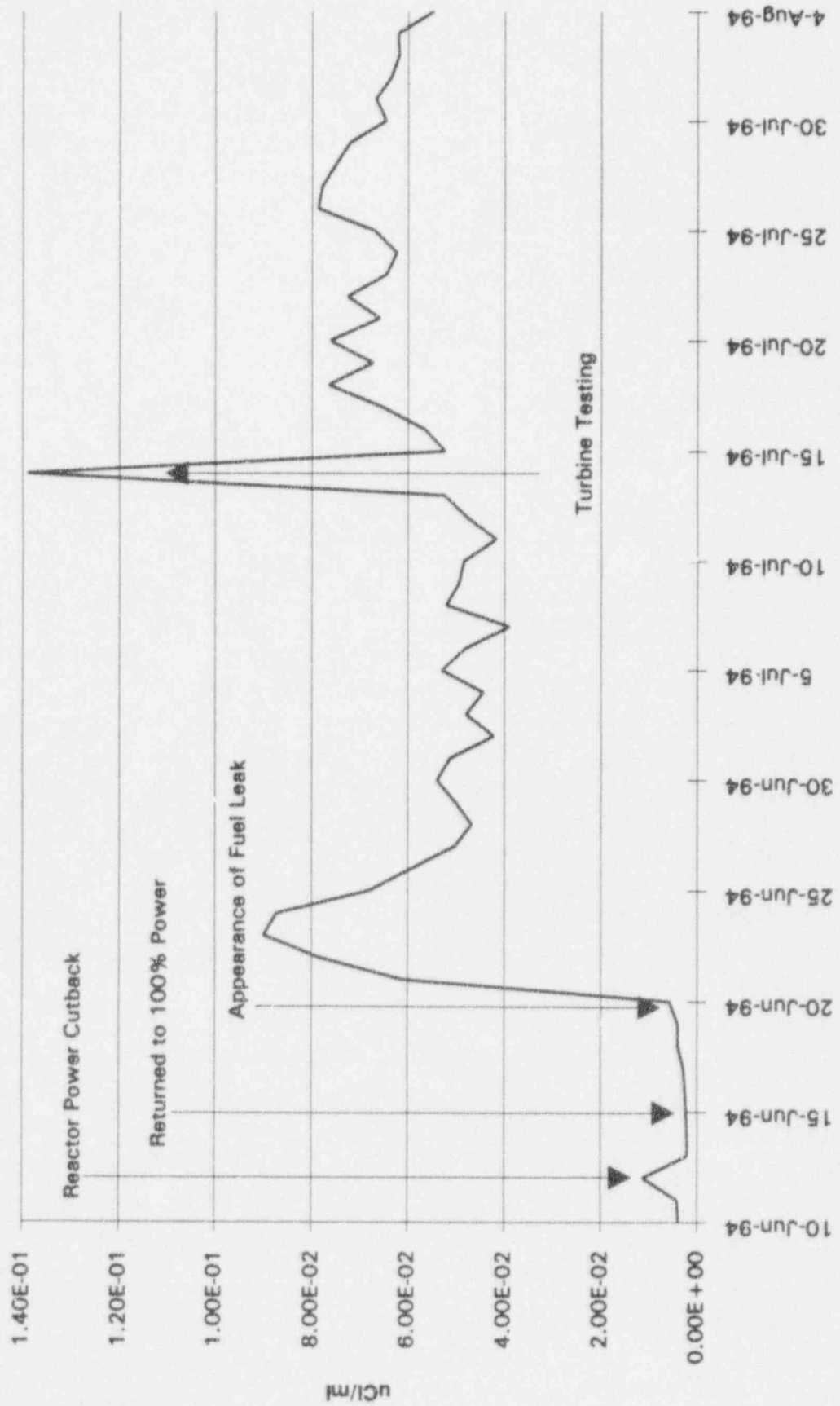


Notary Public

My Commission expires WITH LIFE.

FIGURE

DOSE EQUIVALENT IODINE



DESCRIPTION AND SAFETY ANALYSIS
OF PROPOSED CHANGE NPF-38-157

This proposed change modifies the Waterford 3 Technical Specifications by removing the requirements associated with 3/4.3.4 Turbine Valve Overspeed Protection. The proposed change will relocate these requirements to the Waterford 3 updated Final Safety Analysis Report (FSAR) to further the goal of Technical Specifications Improvements as delineated in NRC policy statements.

Existing Specification

See Attachment A

Proposed Specification

See Attachment B

Background

On February 6, 1987, the NRC published its Interim Policy Statement on Technical Specification Improvements for Nuclear Power Reactors in the Federal Register (Reference 1). In late 1987, based on the Interim Policy Statement, each of the four nuclear steam supply system (NSSS) owners groups submitted proposals identifying requirements in the existing Standard Technical Specifications (STS) that could be relocated from the TS to licensee controlled documents. The staff reviewed these submittals and published its conclusion in the report "NRC Staff Review of Nuclear Steam Supply System Vendor Owners Groups' Application of the Commission's Interim Policy Statement Criteria to Standard Technical Specifications", or "Split Report" (Reference 2).

The NRC Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors (Reference 3) provides criteria to be utilized in determining which requirements need to be governed by TS. The goal is to assure that TS requirements are consistent with 10 CFR 50.36 and have a sound safety basis. The Split Report identified which STS requirements must be retained in the new STS (having met one or more criteria) and those requirements that could be relocated (having met none of the criteria).

Following the guidance of the Split Report, the owners groups proposed improved STS that were subsequently approved and published by the staff as improved STS NUREG reports.

CEN-355 Vol. 5 "Restructured Technical Specifications, Discussion of Changes" (Reference 4), indicates that the Turbine Valve Overspeed Protection requirements are relocated per the criteria application. The CE restructured STS were approved by the staff and issued via NUREG-1432 "Standard Technical Specifications Combustion Engineering Plants." Therefore, Waterford 3 proposes to relocate the identified requirements consistent with NRC approved TS improvements.

Description

The proposed change removes the Limiting Condition For Operation (LCO) 3/4.3.4, the associated Surveillance Requirements, and Bases information from the TS. This information and requirements will be incorporated into the Waterford 3 Updated Final Safety Analysis Report (UFSAR) and maintained under the provisions of 10 CFR 50.59.

The proposed change deletes TS page 3/4 3-68 and Bases sections 3/4.3.4. Index page V is revised to remove reference to Turbine Overspeed Protection.

The Turbine Overspeed Protection specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are operable and will protect the turbine from excessive overspeed. Protection from turbine excessive overspeed is required since excessive overspeed of the turbine could generate potentially damaging missiles which could impact and damage safety related components, equipment, or structures.

The NRC Policy Statement on Technical Specification Improvements for Nuclear Power Reactors provides the following criteria that delineate those constraints on design and operation of nuclear power plants that are derived from the plant safety analysis or probabilistic safety assessments and that belong in Technical Specifications in accordance with 10 CFR 50.36:

Criterion 1: Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 2: A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 3: A structure, system, or component that is part of the primary success path and which functions to actuate or mitigate a Design Basis Accident or Transient that either assumes the failure of or presents a challenge to a fission product barrier.

Criterion 4: A structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

An evaluation of the of the Turbine Overspeed Protection System at Waterford 3 determined that this system does not meet any of the criterion listed above. Therefore, Specification 3/4.3.4 may be relocated from the Waterford 3 TS to the UFSAR pursuant to the NRC Final Policy Statement on Improved Technical Specifications.

Safety Analysis

The proposed change described above shall be deemed to involve a significant hazards consideration if there is a positive finding in any of the following areas:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of any accident previously evaluated?

Response: No

The proposed change relocates the Turbine Valve Overspeed Protection requirements from the TS to the Waterford 3 UFSAR consistent with the NRC Policy Statement on Technical Specification Improvements. Testing and inspections of the turbine Overspeed Protection System will remain governed by an approved turbine maintenance program, described in the UFSAR. This proposed change has no affect on the current Turbine Overspeed Protection requirements other then to relocate them to the UFSAR. Thus, the probability of a turbine missile causing damage to a safety-related component or structure at Waterford 3 as described in the FSAR analysis (Reference 5) is not affected. The purpose of the Turbine Overspeed Protection System is to prevent an overspeed event, the precursor to a potential turbine fragment missile. Since the purpose of this system is preventive, it serves no function to mitigate any accident previously evaluated.

Therefore, the proposed change will not involve a significant increase in the probability or consequences of any accident previously evaluated.

2. Will operation of the facility in accordance with this proposed change create the possibility of a new or different type of accident from any accident previously evaluated?

Response: No

The proposed change does not involve any change to the configuration or method of operation of any plant equipment. No new failure modes or limiting failures have been identified as result of the proposed change. The proposed change will not alter the operation of the plant or the manner in which it is operated. Any subsequent change to the Turbine Overspeed Protection System requirements will undergo a review in accordance with the criteria of 10 CFR 50.59 to ensure that the change does not involve an unreviewed safety question.

Therefore, the proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed change will relocate Turbine Overspeed Protection System requirements from the TS to the Waterford 3 UFSAR on the basis that the Turbine Overspeed Protection System does not meet the criteria of the NRC Final Policy Statement on Technical Specifications Improvements for Nuclear Reactors. The requirements that will reside in the UFSAR for the Turbine Overspeed Protection System will ensure that the system remains capable of protecting the turbine from excessive overspeed. The proposed change will have no adverse impact on any protective boundary or safety limit.

Therefore, the proposed change will not involve a significant reduction in a margin of safety.

Safety and Significant Hazards Determination

Based on the above safety analysis, it is concluded that: (1) the proposed change does not constitute a significant hazards consideration as defined by 10CFR50.92; and (2) there is a reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC final environmental statement.

References

1. 10 CFR Part 50 "Proposed Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" (Federal Register/Volume 52, No. 25 / Friday, February 6, 1987 / Rules and Regulations).
2. "NRC Staff Review of Nuclear Steam Supply System Vendor Owners Groups Application of the Commissions Interim Policy Statement Criteria to Standard Technical Specifications" dated May 9, 1988.
3. 10 CFR Part 50 "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (Federal Register/Volume 58, No. 139 / Thursday, July 22, 1993 / Rules and Regulations).
4. CEN-355 Volume 5 "C-E Owners Group Restructured Standard Technical Specifications Discussion of Changes" May, 1989.
5. Waterford 3 Final Safety Analysis Report
Section 3.5.1.3 Turbine Missiles; Subsection 3.5.1.3.3
Turbine Failure Missile - Probability Analysis

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ATTACHMENT A