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**NUCLEAR SAFETY REVIEW STAFF OFFICE PROCEDURE**

**TITLE:** ASSESSING POTENTIAL IMPACT OF UNVALIDATED  
~~EMPLOYEE CONCERNS ON THE WATTS BAR NUCLEAR PLANT~~ **DATE:** OCT 21 1985  
**FOR THE PURPOSE OF ESTABLISHING PRIORITY FOR INVESTIGATIONS**

**I. PURPOSE**

The purpose of this procedure is to establish a Milestone Review Committee (MRC), provide guidance to that committee for assessing the potential impact of unvalidated nuclear safety-related employee expressed concerns upon WBN during the fuel loading and startup process, and provide a methodology for assigning priority to investigations of those concerns.

**II. SCOPE**

This procedure encompasses the responsibilities of the NSRS and the MRC as related to assessment and prioritization of unvalidated employee concerns expressed about the design, construction, and operation of WBN as possibly related to nuclear safety.

The scope of the MRC function is to evaluate/assess each expressed potentially nuclear safety-related concern in a cursory manner and no attempt will be made by the MRC to investigate or validate any of the concerns. The results of the MRC evaluations/assessments should not be interpreted as a complete safety evaluation. The evaluations/assessments performed by the MRC will generally be performed using the collective knowledge and experience of the MRC members and readily available consultants and documents, if necessary. This process is utilized only for the purpose of assignment of priorities for investigation of the concerns.

**III. POLICY**

It is the responsibility of NSRS to assign priority for investigation of unvalidated employee concerns. The major milestones for investigation purposes are defined as follows:

1. Fuel loading.
2. Initial criticality.
3. Power operation above 5 percent.
4. Power ascension tests.

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5. Plant operations at 100 percent power.
6. Other - examples as follows:
  - Concerns that if validated would probably not have a significant impact on the safety of operations of the plant.
  - Concerns that appear to be related to investigations, reviews, and engineering studies already in progress and with other known assigned commitment dates.

#### -IV. IMPLEMENTATION

##### A. Evaluation of Potential Unvalidated Employee Concerns to Determine Those Related to Nuclear Safety at WBN

Using independently developed criteria, the Employee Response Team (ERT) at WBN will evaluate each unvalidated employee expressed concern to identify those that are potentially related to nuclear safety at WBN. As a review of that process the Investigation Branch of NSRS will reevaluate each concern to confirm the ERT evaluation and to identify nuclear safety-related concerns missed by the ERT. The criteria that will be used for guidance in the NSRS reevaluation is specified in Appendix A of this procedure. Those concerns determined to be potentially nuclear safety-related (P&R) will be assessed for milestone assignment by the MRC.

##### B. The Milestone Review Committee (MRC)

1. The NSRS Investigation Group shall form an employee concerns Milestone Review Committee to assess and prioritize for investigation those potential nuclear safety-related concerns relating to WBN. The MRC shall be comprised of a chairman from the NSRS and at least four other members directly from NSRS or selected for temporary assignment by and with NSRS from the TVA line organizations. The MRC members will provide technical advice to the chairman who will assign the proper milestone for the investigation of the concern. Notes will be recorded for each evaluation. The chairman of the MRC makes the final decision on the milestone. If any member of the MRC disagrees with the decision of the chairman that member can, if desired, prepare a separate opinion which will be filed with the MRC meeting records.
2. The Milestone Review Committee shall meet on a periodic basis to review the nuclear safety-related employee concern sheets. The location shall be determined by NSRS as necessary prior to the meeting.

3. The committee chairman shall maintain committee meeting notes, membership participation, concerns evaluated, etc. (see attachment 1).

C. General Assessment Philosophy

No employee concern shall be dismissed without evaluation regardless of how invalid it may appear to be; experience has proven that seemingly mundane items cited by "lay persons" can have significant safety/schedule impact. Every concern will be examined on its apparent merit (or lack of). The exception to this will be when the concern is a repeat of one that has already been assessed.

In exercising its judgment on these concerns, the Milestone Review Committee should be cautious of the words "all" or "most," etc., when encountered in the concern. This caution should be based on the fact that regardless of what programmatic deficiencies TVA has had in design, construction, procurement, etc., none to date have resulted in the verifiable conclusion that "all" or "most" of any program element, special process, etc., has been found unacceptable. This must be kept in mind when establishing quantitative aspects in assessing impact on a milestone.

Employee concerns will be evaluated considering the quality of the information available in the expressed concern. If there is not enough information, QTC may be contacted to obtain follow-up information. If this information is not available or follow-up is not possible, the MRC may assign a milestone of lesser urgency. This criteria shall not stand alone. Higher priority milestones may be assigned if a trend of several concerns are found in specific areas.

C. Criteria for Assessment

1. Quantitative Assessment of the Concern

Many concerns will involve questions about one type of item or component (such as hangers). When the concern centers on "one here and one there" and is of a random nature, the quantitative effects on any one system are small and its potential milestone impact may be assessed accordingly. This test is not all inclusive, however, and should be applied in conjunction with 2 and 3 below.

2. The Redundancy Test

There are a few structures, systems, and possibly components wherein a single, though random, problem cannot be considered insignificant even for fuel loading. These structures, systems, etc., are those that have no redundant

counterpart. Examples are: the reactor coolant system (primary pressure boundary) and the containment building.

3. Trending

A system will be established to assist the MRC in the evaluation of random concerns to enhance the identification of more serious trends. Each concern K-form will be assessed and key words assigned. These key words will be used for grouping of concerns. Copies of the trend report will be provided to the MRC members for use during the assessment process. The MRC may change the assigned milestone of any investigation(s) at any time based upon trends noted.

4. Technical Specification Operability Requirements

Meeting Technical Specification operability requirements is a criterion that may be used for assignment of a milestone. Whenever considering the other criteria mode operability requirements may be a factor.

5. Assessment Methodology

General milestone criteria to be used by the MRC for guidance is contained in Appendix B of this procedure. Results of the assessment and information considered pertinent to understanding the basis of the MRC conclusion as to the appropriate milestone assigned to each PSR concern will be recorded on attachment 2 of this procedure.

APPENDIX A (Continued)

- d. Indicators and recorders and associated channels which are essential to:
- (1) Perform manual safety functions and to perform post-accident monitoring following a reactor trip due to any condition up to and including the design-limiting fault (containment pressure indicators).
  - (2) Maintain the plant in a hot shutdown condition or to proceed to a cold shutdown condition while meeting the limits of the plant's Technical Specification (system pressure monitor).
  - (3) Monitor conditions in the reactor core, reactor coolant systems, main steam and feedwater systems and containment (auxiliary feedwater flow monitor).
3. Provides a barrier for containing reactor coolant within the reactor coolant pressure boundary (reactor coolant piping, valves, and fittings).
  4. Cools the reactor core under emergency conditions (residual core heat removal systems).
  5. Maintains fuel clad integrity (fuel clad, core power monitoring systems).
  6. Provides power, control, logic, indication, and protection to systems or components to enable them to accomplish their safety function (diesel generators, vital ac and dc power).
  7. Supports or houses equipment that performs a safety function or protects that safety-related equipment from potential natural phenomena, equipment failure, and man made hazards (seismic class I containment and structures, fire protection systems).
  8. Maintains specified environment (e.g., temperature, pressure, humidity, radiation) as required in vital areas to maintain equipment operability and personnel access (control room habitability systems).
  9. Supplies cooling water for the purpose of heat removal from the systems and components which provide a safety function (essential component cooling and service wafer systems).
  10. Contains radioactive waste such that its failure could result in the release of radioactive waste to the offsite environments in violation of criterion A.3 (low-level radioactive waste discharge isolation valves).
  11. Controls fuel storage to prevent inadvertent criticality (fuel storage racks).

## APPENDIX A (Continued)

12. Ensures adequate cooling for irradiated fuel in spent fuel storage (spent fuel cooling system).
13. Minimizes the probability of dropping objects on stored fuel (overhead crane).
14. Maintains primary containment as required by the FSAR to meet General Design Criteria 54, 55, 56, and 57 (containment penetrations and associated isolation and boundary valves).
15. Doors and hatches which serve one or more of the following functions for safety-related equipment and areas: (1) pressure confinement, (2) leakage confinement, (3) missile protection, (4) pipe whip and jet impingement barrier, (5) equipment rupture flood protection, (6) natural flood protection, or (7) fire protection.

**B. Safety-Related Activities**

Activities that may directly or indirectly affect the ability of CSSC to perform their safety-related functions include but are not limited to the following:

1. Design
2. Purchasing
3. Fabrication
4. Handling
5. Shipping
6. Storing
7. Erecting or constructing
8. Cleaning
9. Inspection
10. Testing
11. Operation
12. Maintaining
13. Repairing
14. Modifying
15. Auditing

**C. Commitments**

TVA has committed to design, construct, and operate WBN in accordance with applicable Federal regulations, codes and standards, FSAR, Technical Specifications, and other commitments made to the regulatory agencies.

Any concern expressed by an employee, an interested individual, or a group that relates in a negative manner to the ability of CSSCs to perform their intended function, to safety-related activities, or to a violation or deviation from TVA commitments should be classified as potentially nuclear safety related (PSR) and evaluated by the MRC for milestone applicability.