

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Docket/Report No. 50-289/88-04

Licensee: DRP-5C

Licensee: GPU Nuclear Corporation  
P. O. Box 480  
Middletown, Pennsylvania 17057

Facility: Three Mile Island Nuclear Station, Unit 1

Location: Middletown, Pennsylvania

Dates: October 13-15, 1987, and February 5, 1988

Reporting  
Inspector: R. Conte, Senior Resident Inspector

Approved by:

*C. Cowgill*  
C. Cowgill, Chief, Reactor Projects Section No. 1A

*2/23/88*  
Date

Inspection Summary:

This was a special safety inspection to review the licensee's response, dated August 28, 1987, to an NRC issued Notice of Violation, dated July 29, 1987 (NRC Inspection Report No. 50-289/87-08). This dealt with the adequacy and proper implementation of the licensee's Technical and Safety Review Program (TSRP). The initial review of the licensee's response necessitated an additional inspection at both the site and at the corporate office.

Inspection Results

The licensee denied a majority of the items cited. One item was retracted by NRC staff due to unsubstantiated information. Licensee corrective actions were summarized; but, in certain instances, more specific information was needed. The adequacy and proper implementation of the licensee's TSRP remains open pending a forthcoming management meeting in Region I and pending subsequent inspection verification of licensee actions.

## DETAILS

### 1. Introduction and Overview

The purpose of this inspection was to review the licensee's response to a Notice of Violation issued by Region I on July 29, 1987. This concerned the adequacy and implementation of the licensee's Technical and Safety Review Program (TSRP) in which specific findings were first identified during a performance appraisal team inspection in September 1986. The licensee's response to the violation was dated August 28, 1987.

As a result of NRC staff initial review of the licensee's response, it was determined that additional information was needed to better understand the licensee's response and/or corrective actions. Accordingly, in conjunction with a corporate inspection in October of 1987 (NRC Inspection Report No. 50-289/87-19), additional information related to licensee response was obtained as documented below.

### 2. (Open) Violation (289/87-08-01): Failure to Properly Document and Implement the Technical and Safety Review Program for Facility Modifications and Procedure Changes

#### 2.1 General Corrective Actions

During this inspection period, the inspector reviewed the licensee's response, dated August 28, 1987, to the cited Notice of Violation. The licensee disagreed with essentially all parts of the violation, except on the one issue (Notice Item No. 2.a) on failure to properly classify special temporary procedures (STP's) which resulted in no safety evaluation documentation for the subject STP's.

For item 2.a, the licensee's letter indicated that both immediate corrective action and measures to prevent recurrence (although not specifically stated as such) were to issue initial and final (procedural) guidance on the classification of STP's. Since this was not specific, the inspector reviewed Administrative Procedure (AP) 1001A, Revision 13, dated June 26, 1987, "Procedure Review and Approval," Enclosure 4. The inspector found that guidance was "in most cases, if an affected system corresponding operating procedure is classified as ITS [important to safety], then the STP will be classified as ITS." Interim guidance at TMI-1 Division is that ITS classified systems will get a "Form (Figure) 4" (safety determination -- first form) and a "Form (Figure) 5" (safety evaluation -- second form) review which includes a 10 CFR 50.59 safety evaluation. In the interim, this action resolves the specific concern but addressed below is a broader issue on the use of safety determinations (SD's) in distinction to safety evaluations (SE's) as defined by the licensee.

Also, in the licensee's response, the licensee claims no Temporary Change Notice (TCN) misclassification occurred as identified by Quality Assurance (QA) Department. This statement was confirmed by the licensee's QA audits supervisor. The applicable inspection reports were not specific as to which TCN's were misclassified. Accordingly, this portion of the violation is considered to be retracted.

In an attempt to resolve the fundamental issues of the cited violation, the inspector identified the following corrective actions (summary).

Response to Notice of Violation Item No. 1

- (1) The subject air-operated valve positioner used in the emergency feedwater (EFW) system was replaced by another positioner, but the licensee does not state whether or not the related safety evaluation substantiates its use as an adequate replacement-in-kind considering appropriate safety-grade criteria.
- (2) During the corporate visit addressed in NRC Inspection Report No. 50-289/87-19, Section 5, the inspector learned of an additional action which is not specifically stated in the licensee's response letter. Revisions to safety evaluations will get a new Form 1/2, "Safety Determination/Evaluation," for each subsequent revision.

Response to Notice of Violation Item No. 2

- (3) The applicable corporate procedure would be revised to require an explicit statement for negative responses on the SD (Form 1 of the two-step process). Form 2 is the SE which applies the remaining 10 CFR 50.59 question with respect to unreviewed safety questions.
- (4) Development of guidance with respect to the definition of Licensing Basis Documents (LBD) but specifics are not stated (unresolved item No. 289/87-08-02).
- (5) Self-assessment of the effectiveness of the safety review process but specifics are not stated.
- (6) Administrative Procedure (AP) 1001J and Corporate Procedure CP-6 are being revised to define the process of safety review for all test procedures generated by startup and test, which may or may not be used to satisfy required technical specifications or surveillance testing.

Items (1), (2), and (6) will be verified in a subsequent inspection as follow-up to this item. Item (3) above was verified by review of Revision 3, dated October 1, 1987, to Corporate Procedure 1000-ADM-1291.01, "Procedure for Nuclear Safety and Environmental Impact Review and Approval of Documents." With respect to items (4) and (5), additional information is needed from the licensee detailing the scope of the programs.

## 2.2 Safety Evaluation Process

With respect to item (1) of paragraph 2.1 for procedural changes, a fundamental problem still exists. It centers around the corrective action to explain the "NO" answers of the SD in meeting the requirements of applicable TS and 10 CFR 50.59. The NRC staff expects all changes, to safety-related procedures (in TMI-1's case, important-to-safety procedures by TS 6.8.1) receive a safety evaluation appropriate to the circumstances using as a minimum the basic questions/criteria of 10 CFR 50.59 (TS 6.8.2).

More specifically, the licensee's program would not necessarily achieve these results based on a review of licensee's response letter and procedural guidance. The licensee's SD Form Question No. 5 asks whether or not the document or change (under review) requires a revision to any procedural or operating description in the Final Safety Analysis Report (FSAR), TS, or LBD. The licensee had not mandated to its personnel to broadly consider the required procedures of TS 6.8.1 to be a part (by reference) of the FSAR or LBD. Literally, since very few specific procedures are described in the FSAR, TS, or LBD, a "NO" would usually be answered on the SD and the safety evaluation (second form) would not have to be completed for a substantial change to a safety-related procedure.

Another SD question that could possibly trigger the use of the SE is No. 3, which asks broadly "does this document or change have the potential to adversely affect nuclear safety or safe plant operation." The accompanying procedural guidance asks personnel to consider overall effect on safety-related equipment by one example, such as scaffolding over safety-related equipment. However, there is no requirement to explain a "NO" answer to the question. A "YES" answer on the SD would trigger the safety evaluation consistent with 10 CFR 50.59. In light of this existing licensee guidance, answering question 3 would be highly judgmental and it would not guarantee a consistent level of performance in justifying no affect on safety.

For example, licensee personnel may change the operating procedure or create a special procedure for a makeup and purification (MU) (high pressure safety injection) pump to rely on the auxiliary gear oil pump for operability during power operations instead of the shaft-driven gear oil pump. The safety significance of the action is that the auxiliary gear oil pump is not environmentally qualified (licensee letter of November 9, 1984). It is not clear that the safety determination form (alone) would trigger a detailed review to uncover the licensee-related procedural commitment of declaring the MU pump inoperable if the shaft-driven gear oil pump were inoperable. The safety evaluation form more adequately prompts the responsible technical reviewer to research the design basis for the subject pumps.

Additional NRC staff review is needed to address the adequacy of the licensee's TSRP.

### 2.3 Draft Technical Specification

During the above-noted corporate inspection, the licensee also indicated that a Technical Specification Change Request (TSCR) is forthcoming to clarify the original intent of the current Technical Specifications (TS) on the TSRP.

In December of 1987, a licensee representative provided the inspector a draft copy of the above-noted TSCR. It is not clear that the draft TSCR clarifies the original intent of current TS on this matter. This item will be referred to the Office of Nuclear Reactor Regulation (NRR).

### 2.4 Additional Clarification

Further, in response to Notice of Violation Item No. 2.c, a statement was made by the licensee on page 9 of their response with which NRC Region I disagrees. They state: "Neither 10 CFR 50.59 nor the TMI-1 Technical Specification require documentation of the basis for a conclusion that a change does/does not conflict with Technical Specification compliance." If a procedural change conflicts with current TS and does not specifically conflict with the related TS basis, it is still the licensee's responsibility to identify that conflict and resolve it. Implied in 10 CFR 50.59 requirements to justify no conflict with the basis of the TS is the need to justify no conflict with the TS. It remains unclear what the licensee intended to say by this statement even after discussion with licensee representatives.

### 2.5 Conclusion

In conclusion, the licensee's response does not justify retraction of the violation (except as noted above in paragraph 2.1). The licensee is using a TSRP that is currently unapproved by NRC staff.

The violation remains open pending: (1) inspector verification of acceptable corrective actions as noted above; (2) licensee clarification on issues so stated above; and (3) results of a forthcoming management meeting with NRC staff to discuss this matter.

## 3. Exit Interview

The inspector and Mr. C. Cowgill, Region I discussed the inspection scope and findings with the following licensee representatives at a final exit interview conducted by telephone on February 5, 1988:

- R. Germann, Nuclear Safety Assessment Director
- S. Kowkabany, Licensing Engineer
- R. McGoey, Manager, PWR Licensing
- M. Nelson, Safety Review Manager
- C. Smyth, TMI Licensing Manager

The inspection results are summarized in the cover page of the inspection report.