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Nuclear Operations

June 2, 1988

U. S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D. C. 20555

Attention: Document Control Desk

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Report No. 50-416/88-07
dated May 3, 1988
(MAFC-88/0099)
AECM-88/0116

System Energy Resources, Inc. (SERI) hereby submits its response to violation 50-416/88-07-02. SERI's response to violation 50-416/88-07-03 will be submitted under separate cover.

Through numerous discussions with NRC Region II Staff and the Resident Inspector, SERI recognizes and appreciates the NRC's position on 10CFR50.59 as it applies to the facts cited in the Notice of Violation and to the issue of plant maintenance.

SERI has reviewed the sequence of events leading to the Notice of Violation and has researched available information on 10CFR50.59, particularly with respect to maintenance activities. SERI recognizes there is very little guidance available on the application of 10CFR50.59 to maintenance activities. Also SERI recognizes the need to make prompt determination of impact on operability in maintenance situations. From its research SERI does not consider 10CFR50.59 applicable regarding the cited issue.

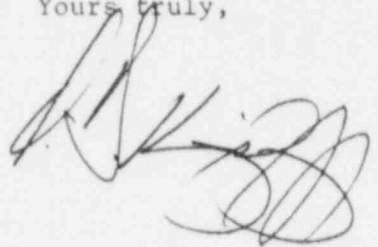
The occurrence of this Notice of Violation underscores the need for more definitive guidance on the proper application of 10CFR50.59 and on the definition of terms and concepts. This additional guidance should go considerably beyond that provided in current NRC documents. SERI is actively supporting the NUMARC effort on 10CFR50.59 and will recommend that the issue of maintenance be specifically addressed.

SERI recommends that a meeting be held to discuss this issue. SERI believes that a meeting would be the most expeditious and efficient means to discuss the issue and its broader implications, obtain written guidance from the NRC with respect to the applicability of 10CFR50.59 to maintenance activities, and to reach a resolution.

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Furthermore, SERI recognizes the importance of 10CFR50.59 and the increasing emphasis being placed on this regulation by the Commission. Anticipating the need to improve its understanding and application of the regulation, SERI commenced efforts in 1987 to upgrade training and procedures controlling the application of 10CFR50.59 at Grand Gulf Nuclear Station. SERI has periodically briefed NRC representatives on the upgrade program's progress and has sought any NRC formal guidance that was available to incorporate into its position document. The upgraded training program is currently in progress. Any pertinent information resulting from this Notice of Violation will be incorporated into the SERI program. We believe that these actions will help to assure that similar Notices of Violation are not issued in the future.

Yours truly,

A handwritten signature in black ink, appearing to be 'D. K. ...', written over the typed text 'Yours truly,'.

ODK:bms
Attachment

cc: Mr. T. H. Cloninger (w/a)
Mr. R. B. McGehee (w/a)
Mr. N. S. Reynolds (w/a)
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NOTICE OF VIOLATION

10CFR50.59(b)(1) states that the licensee may make changes in the facility as described in the FSAR unless the changes involve an unreviewed safety question. The licensee shall maintain records of changes in the facility made pursuant to 10CFR50.59 and these records must include a written safety evaluation which provides the basis for the determination that the changes do not involve an unreviewed safety question.

Contrary to the above, the licensee did not perform a written 10CFR50.59 evaluation to determine that manual operation in lieu of automatic operation of the pot drain valves on the RCIC steam supply pipe line as described in the Final Safety Analysis Report (FSAR) 7.4.1.1.3.4 does not constitute an unreviewed safety question.

I. Admission or Denial of the Alleged Violation

System Energy Resources, Inc. (SERI) denies the violation. SERI admits to the facts as stated in Inspection Report 50-416/88-07. However, since the automatic operation of the condensate pot drain valves was not functioning due to failed solenoids, SERI considers the interim use of manual operation while replacing the solenoids as part of a maintenance activity. After careful study, SERI concludes that the failure to perform a 10CFR50.59 evaluation on this maintenance activity is not a violation. SERI maintains that the regulation does not require unreviewed safety question evaluations for plant maintenance activities of this type.

A. System Description:

1. To prevent the RCIC steam supply pipeline from filling up with condensed steam and cooling excessively, a condensate drain pot, steam line drain, and appropriate valves are provided in a drain pipeline arrangement just upstream of the turbine supply valve (see attached simplified drawing). During normal operation steam line drainage is routed to the main condenser through a steam trap.
2. High level in the condensate drain pot indicates apparent failure of the normal trap drain system and provides an annunciated alarm in the control room. Upon receipt of the alarm, operators are directed to check that the automatic trap bypass valve opens. If this fails, the alarm is cleared by opening 2 manual operated valves to drain the condensate pot through separate drain lines.
3. Upon receipt of an RCIC initiation signal, the drainage path is isolated.

B. Sequence of Key Events:

1. November 7, 1987 ASCO 120 VAC solenoids valves ordered to replace discontinued models.
2. December 29, 1987 ASCO 120 VAC solenoids installed. System returned to operation on January 2, 1988.
3. March 23, 1988 Valves E51F025 and E51F026 failed. Operability impact assessment performed on the RCIC system. RCIC system determined to be operable.
4. March 25, 1988 ASCO 125 VDC solenoid valves ordered to replace 120 VAC solenoid valves previously installed.
5. March 28, 1988 A Quality Deficiency Report was written because Q1E51-F025 and Q1E51-F026 solenoid valves were replaced with 120 VAC solenoid valves in error on December 29, 1987.
6. April 15, 1988 The AC solenoids were replaced with the correct DC solenoids.
7. April 19, 1988 Valves E51F025 and E51F026 returned to service.

C. Application of 10CFR50.59:

1. On March 23, 1988 the Main Steam Line to Reactor Core Isolation Cooling (RCIC) turbine inlet drain pot drain valves, E51-F025 and F026, failed to operate. The failure was determined to be due to failed solenoids located on the two valves.
2. An evaluation was performed for impact to the operability of the RCIC system. The RCIC system was determined to be operable since the valves failed in the safe position. This evaluation was completed on March 23, 1988.
3. The evolution required to restore the automatic operation of the drain pot drain valves was considered by SERI to be a maintenance activity. The replacement solenoids were ordered on March 25, 1988. It was SERI's full intention to replace the failed solenoids with components called for by design and restore the system to its normal configuration as described in the UFSAR and design documentation.

4. As discussed with the NRC, the drain function could be accomplished in the interim period by manual methods. Also during this time the high condensate Alarm Response Instruction specifically directs operators to use the manual drain valves if the automatic drain function is inoperable.
5. SERI does not consider this condition to be a change to a system as described in the UFSAR requiring a 10CFR50.59 evaluation.
6. The NRC I&E Manual (Part 9800 page 2, paragraph 5) states the following concerning maintenance activities:

"Maintenance activities which do not result in a change to a system (permanent or temporary), or which replace components with replacement parts procured to the same (or equivalent) purchase specification, do not require a written safety evaluation to meet 10CFR50.59 requirements. However, if components described in the SAR are removed, or their function is altered, or if substitute components are utilized, or if changes remain following completion of a maintenance activity, a safety evaluation is required to meet the provisions of 10CFR50.59 and the change must be reported to the NRC as required by 10CFR50.59(b)."

7. Based on SERI's interpretation of Part 9800 of the I&E Manual, this condition was not a maintenance activity involving temporary changes to the system (i.e., the loss of the automatic operation was not caused by the maintenance activity). It was SERI's intent to restore the system to its original design as described in the UFSAR (i.e., proper solenoids installed with the automatic function restored). Therefore, no change would remain after the maintenance activity was complete.

D. Follow-up Actions:

1. Operations licensed personnel will be briefed on this issue with emphasis on the guidance of Part 9800 of the I&E Manual regarding maintenance activities. This action will be completed by August 26, 1988.
2. Upon resolution of this issue, a report will be made to the PSRC and the SRC, Operations personnel will be briefed, and the information regarding this issue will be incorporated into the training program on 10CFR50.59.
3. SERI will perform and document a lessons learned critique on this issue. Corrective actions will be established to prevent recurrence of similar events. This action will be completed by June 30, 1988.

4. As a result of SERI's review of this issue, several actions are considered prudent to improve the review, processing, and decision making associated with the application of 10CFR50.59 on maintenance activities. These actions will be completed by June 30, 1988. SERI believes that, in the majority of cases, the operability impact determination is relatively straight forward. In such cases the shift is capable of making the assessment with little or no assistance from off-shift staff or management. In those cases where in the judgement of shift management that the impact on operability is not clear and that the issue should be given management attention, the Duty Manager will be briefed on the issue and involved in the operability impact decision. In these cases,
 - a. Duty Manager involvement will be documented.
 - b. In those cases where the affected equipment is determined operable, the key elements of this rationale will be documented.
 - c. Affected procedures will be reviewed for potential revision as a result of the affected equipment's condition. Any required revisions would be subject to applicability screening for 10CFR50.59.
5. SERI will recommend to the NUMARC working group on 10CFR50.59 that this issue on maintenance activities be further reviewed. SERI will also recommend that NUMARC's position and guidance on this aspect of applying 10CFR50.59 be included in its guidelines on 10CFR50.59 and in on-going discussions with NRC staff. This action will be completed by June 15, 1988.

E. Summary and Conclusions:

SERI recognizes the NRC's interpretation of this issue but does not conclude that 10CFR50.59 was violated.

Overall, SERI considers the identification, evaluation, and repair actions associated with the subject solenoid valves to be a maintenance activity to which 10CFR50.59 does not apply. In this case the system was restored with no net change with respect to the UFSAR description. The operability impact review was pursued promptly with the determination made that the affected system remained operable.

The procurement and installation of replacement parts were pursued in a timely manner. Adequate design and administrative measures were in place in the interim to support the operability determination. This issue received management attention daily by way of the daily status reports on on-going conditions in the plant. SERI concludes that this activity does not constitute a change to the facility as described in the UFSAR based on its interpretation of 10CFR50.59 and its understanding of NRC guidance on the subject as provided in the NRC I&E Manual.

SERI recognizes that a key NRC concern is one of "timing", i.e., at what point does pursuit of corrective maintenance action (even in exact replacement cases) become non-timely. SERI shares this NRC concern in that there is little definitive guidance on this subject. SERI recognizes the importance of making a prompt assessment of operability impact in such cases. In this case SERI believes that it acted promptly in the operability impact determination and in an overall timely manner on effecting repairs.

SERI believes that such situations should be evaluated on a case-by-case basis and in some situations a 10CFR50.59 evaluation would be appropriate. However, SERI does not envision at this time a clear guideline on "timing" that would avoid a significant increase in the number of 10CFR50.59 evaluations performed. Under these circumstances, SERI believes that many of these evaluations would be unnecessary. The net result of poorly conceived criteria would be to dilute plant, engineering, and management resources, which in turn could result in a net degradation of the 10CFR50.59 program and management attention to safety issues.

SERI believes that this issue should be addressed and resolved on a broader, generic industry basis and is taking steps toward that end. The establishment of such a resolution would greatly benefit the industry and the NRC and clarify criteria for enforcement thus avoiding situations such as the current Notice of Violation. SERI proposes that a meeting be held to discuss this issue. SERI believes that a meeting would be the most expeditious and efficient means to discuss the issues, its broader implications and determining a resolution.

Consistent with this approach, SERI proposes that this issue be categorized as unresolved pending compilation of more definitive guidance on the subject.

SIMPLIFIED DIAGRAM

