



Entergy Operations, Inc.  
P. O. Box 756  
Port Gibson, MS 39150  
Tel 601 437 6409  
Fax 601 437 2795

**William A. Eaton**  
Vice President,  
Operations  
Grand Gulf Nuclear Station

July 25, 2000

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

Subject: Grand Gulf Nuclear Station  
Docket No. 50-416  
License No. NPF-29  
Failure to Comply with Technical Specification 3.0.3  
LER 2000-001-00

GNRO-2000/00054

Ladies & Gentlemen:

Attached is Licensee Event Report (LER) 2000-001-00 which is a final report. Should you have any questions or require additional information regarding the contents of this report, please contact the licensing representative listed on the attached LER.

Yours truly,

A handwritten signature in cursive script, appearing to read "William A. Eaton".

WAE/MJL

attachments: 1. LICENSEE-IDENTIFIED COMMITMENTS  
2. LER 2000-001-00

cc: (See Next Page)

July 25, 2000  
GNRO-2000/00054  
Page 2 of 2

cc: Ms. J. L. Dixon-Herrity, GGNS Senior Resident (w/a)  
Mr. D. E. Levanway (Wise Carter) (w/a)  
Mr. L. J. Smith (Wise Carter) (w/a)  
Mr. N. S. Reynolds (w/a)  
Mr. H. L. Thomas (w/o)

Mr. Ellis W. Merschoff (w/2)  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

Mr. S. P. Sekerak, NRR/DLPM/PD IV-I (w/2)  
**Attn: ADDRESSEE ONLY**  
U.S. Nuclear Regulatory Commission  
One White Flint North, Mail Stop O7-D1  
11555 Rockville Pike  
Rockville, MD 20852-2378

# **ATTACHMENT 1 TO GNRO-2000/00054 LICENSEE-IDENTIFIED COMMITMENTS**

| Letter #:  | GNRO-2000/00054                              |                       |   |  |
|--|--|-----------------------|---|--|
| COMMITMENT   | TYPE<br><small>(Check only one type)</small> |                       | SCHEDULED                                       |  |
|  | ONE-TIME ACTION                              | CONTINUING COMPLIANCE | COMPLETION DATE<br><small>(If Required)</small> |  |
| <p>The following procedures reviewed and revised as necessary to clarify requirements for drywell floor drain sump monitoring operability to satisfy TS LCO 3.4.7.</p> <ul style="list-style-type: none"><li>• 04-1-02-1H13-P680-4A1-E3, ALARM RESPONSE INSTRUCTION</li><li>• 06-IC-1P45-M-0001, DRYWELL FLOOR DRAIN SUMP LEVEL SWITCH FUNCTIONAL TEST</li><li>• 17-S-06-5, TECHNICAL SPECIFICATION INSTRUMENTATION LOOP LOGIC</li></ul> | YES  |                       | N/A   |  |
| <p>Details of this event will be discussed with operations shift personnel to ensure requirements for operability of drywell floor drain monitoring are understood.</p>  | YES  |                       | N/A   |  |

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50.0 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

## LICENSEE EVENT REPORT (LER)

|   |           |             |   |                   |                    |                        |           |             |   |                                       |       |   |                           |  |  |
|---|-----------|-------------|---|-------------------|--------------------|------------------------|-----------|-------------|---|---------------------------------------|-------|---|---------------------------|--|--|
| FACILITY NAME (1)<br><b>Grand Gulf Nuclear Station, Unit 1</b>                    |           |             |   |                   |                    |                        |           |             |   | DOCKET NUMBER (2)<br><b>05000-416</b> |       |   | PAGE (3)<br><b>1 of 7</b> |  |  |
| TITLE (4)<br><b>Failure to Comply with Technical Specification 3.0.3</b>          |           |             |   |                   |                    |                        |           |             |   |                                       |       |   |                           |  |  |
| <b>EVENT DATE (5)</b>   |           |             | <b>LER NUMBER (6)</b>   |                   |                    | <b>REPORT DATE (7)</b> |           |             | <b>OTHER FACILITIES INVOLVED (8)</b>                        |                                       |       |   |                           |  |  |
| MONTH   | DAY       | YEAR        | YEAR  | SEQUENTIAL NUMBER | REVISION NUMBER    | MONTH                  | DAY       | YEAR        | FACILITY NAME<br><b>N/A</b>                                 |                                       |       | DOCKET NUMBER<br><b>N/A</b>                   |                           |  |  |
| <b>06</b>   | <b>28</b> | <b>2000</b> | <b>2000</b>   | <b>001</b>        | <b>00</b>          | <b>07</b>              | <b>25</b> | <b>2000</b> | FACILITY NAME<br><b>N/A</b>                                 |                                       |       | DOCKET NUMBER<br><b>N/A</b>                   |                           |  |  |
| <b>OPERATING MODE (9)</b>   |           | <b>1</b>    | <b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more) (11)</b> |                   |                    |                        |           |             |   |                                       |       |   |                           |  |  |
| <b>POWER LEVEL (10)</b>   |           | <b>100</b>  | 20.2201(b)  |                   |                    | 20.2203(a)(2)(v)       |           | <b>X</b>    | 50.73(a)(2)(i)  |                                       |       | 50.73(a)(2)(viii)                             |                           |  |  |
|   |           |             | 20.2203(a)(2)(i)  |                   |                    | 20.2203(a)(3)(i)       |           |             | 50.73(a)(2)(ii)   |                                       |       | 50.73(a)(2)(x)                                |                           |  |  |
|   |           |             | 20.405(a)(1)(ii)  |                   |                    | 20.2203(a)(3)(ii)      |           |             | 50.73(a)(2)(iii)  |                                       |       | 73.71   |                           |  |  |
|   |           |             | 20.2203(a)(2)(ii)   |                   |                    | 20.2203(a)(4)          |           |             | 50.73(a)(2)(iv)   |                                       |       | <b>OTHER</b>                                  |                           |  |  |
|   |           |             | 20.2203(a)(2)(iii)  |                   |                    | 50.36(c)(1)            |           |             | 50.73(a)(2)(v)  |                                       |       | Specify in Abstract below or in NRC Form 366A |                           |  |  |
|   |           |             | 20.2203(a)(2)(iv)   |                   |                    | 50.36(c)(2)            |           |             | 50.73(a)(2)(vii)  |                                       |       |   |                           |  |  |
| <b>LICENSEE CONTACT FOR THIS LER (12)</b>   |           |             |   |                   |                    |                        |           |             |   |                                       |       |   |                           |  |  |
| NAME<br><b>Michael J. Larson/Senior Licensing Specialist</b>                      |           |             |   |                   |                    |                        |           |             | TELEPHONE NUMBER (Include Area Code)<br><b>601-437-6685</b> |                                       |       |   |                           |  |  |
| <b>COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)</b> |           |             |   |                   |                    |                        |           |             |   |                                       |       |   |                           |  |  |
| CAUSE   | SYSTEM    | COMPONENT   | MANUFACTURER  |                   | REPORTABLE TO EPIX |                        | CAUSE     | SYSTEM      | COMPONENT   | MANUFACTURER                          |       | REPORTABLE TO EPIX                            |                           |  |  |
|   |           |             |   |                   |                    |                        |           |             |   |                                       |       |   |                           |  |  |
|   |           |             |   |                   |                    |                        |           |             |   |                                       |       |   |                           |  |  |
|   |           |             |   |                   |                    |                        |           |             |   |                                       |       |   |                           |  |  |
| <b>SUPPLEMENTAL REPORT EXPECTED (14)</b>  |           |             |   |                   |                    |                        |           |             | <b>EXPECTED SUBMISSION DATE (15)</b>                        |                                       | MONTH | DAY   | YEAR                      |  |  |
| <b>YES</b><br>(If yes, complete EXPECTED SUBMISSION DATE).                        |           |             |   |                   | <b>X</b>           | <b>NO</b>              |           |             |   |                                       |       |   |                           |  |  |

**ABSTRACT** (Limit to 1400 spaces, i. e., approximately 15 single-spaced typewritten lines) (16)

On June 28, 2000 between 1410 to 1424, for a period of 14 minutes, operators did not recognize the need to take the Required Actions of Technical Specification (TS) Limiting Condition for Operation (LCO) 3.4.7, specifically Required Action F. Entry into LCO 3.4.7, Required Action F is required if there is no operable Reactor Coolant System (RCS) Leakage Detection Instrumentation. LCO 3.4.7 Required Action F requires immediate entry into LCO 3.0.3 which requires a shutdown to be initiated within one hour. Failure to perform the Technical Specification LCO actions was not discovered until June 29, 2000 at 1745 at which time a Condition Report (CR-GGN-2000-0931) was written and root cause investigation was initiated. The requirements of TS 3.4.5 for Reactor Coolant System (RCS) Operational Leakage were met throughout the event since the remainder of the calculation process for drywell floor drain sump inleakage remained operable throughout this event. The described condition has no effect on core damage frequency as it does not impact potential core damage initiators or any of the systems that would be utilized for mitigation following potential initiators.

NRC FORM 366A

(6-1998)

U.S. NUCLEAR REGULATORY COMMISSION

**LICENSEE EVENT REPORT (LER)**

| FACILITY NAME (1)                  | DOCKET (2) | LER NUMBER (6) |                      |                    | PAGE (3) |
|------------------------------------|------------|----------------|----------------------|--------------------|----------|
|                                    |            | YEAR           | SEQUENTIAL<br>NUMBER | REVISION<br>NUMBER |          |
| Grand Gulf Nuclear Station, Unit 1 | 05000-416  | 2000           | 001                  | 00                 | 2 OF 7   |

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**A. Reportable Occurrence**

On June 28, 2000 between 1410 to 1424 for a period of 14 minutes operators did not recognize the need to take the actions of Technical Specification (TS) Limiting Condition for Operation (LCO) 3.4.7, Required Action F. Required Action F requires immediate entry into LCO 3.0.3. LCO 3.0.3 requires action to be initiated to shutdown within 1 hour. At 1425 the conditions for entry into LCO 3.4.7, Required Action F no longer applied due to realignment of systems. Failure to perform the Technical Specification LCO Required Actions was not discovered until June 29, 2000 at 1745 at which time a Condition Report (CR-GGN-2000-0931) was written and root cause investigation was initiated. It is important to note that the 14-minute period was well within the required shutdown time requirement of one hour as stated for LCO 3.0.3.

This event was considered to be a condition prohibited by the plant's Technical Specifications and therefore is reportable pursuant to 50.73(a)(2)(i)(B).

**B. Initial Conditions**

At the time of the event the Unit OPERATIONAL CONDITION was MODE 1, Power Operation. Reactor Power was at 100 percent and Reactor Coolant Temperature was 527 degrees Fahrenheit.

**C. Description of Occurrence**

On June 28, 2000, between 1410 to 1424, all Reactor Coolant System (RCS) Leakage Detection Instrumentation [IJ], as required by TS LCO 3.4.7, was inoperable. LCO 3.4.7 requires three leak detection systems to be operable which include: drywell floor drain sump monitoring, one channel of either drywell atmospheric particulate or atmospheric gaseous monitoring, and drywell air cooler condensate flowrate monitoring.

The drywell air cooler condensate flowrate monitoring system was declared inoperable on May 1, 2000 (LCO#2000-0449). LCO 3.4.7, Condition C, was entered requiring a channel check of drywell atmospheric monitoring on an eight-hour frequency. An engineering evaluation had been initiated per CR-GGN-2000-0601 and initial troubleshooting had not resolved the problem. Additional troubleshooting is planned for RF11 per maintenance action item (MAI) 278052.

The drywell floor drain sump monitoring system was inoperable on June 28, 2000 from about 1100 to 1430 as a result of "LDS Trouble" alarm malfunction. During the time that this alarm malfunctioned, it was not recognized that the drywell floor drain sump monitoring system should have been considered inoperable. Therefore, the appropriate LCO (3.4.7 Condition A) was not entered. Review of possible alarm causes per the alarm response instruction (ARI) indicated that the alarm was not valid. MAI 281073 was initiated at 1233 to identify the problem with "LDS Trouble" alarm (P680-4A1-E3). The reason for the malfunctioning alarm was not known at the time, however, it was suspected to be a multiplexer (MUX) problem. The alarm was entered into the deficient equipment identification log book and a red tape was installed to identify this as a problem alarm.

NRC FORM 366A

(6-1998)

U.S. NUCLEAR REGULATORY COMMISSION

**LICENSEE EVENT REPORT (LER)**

| FACILITY NAME (1)                  | DOCKET (2) | LER NUMBER (6) |                      |                    | PAGE (3) |
|------------------------------------|------------|----------------|----------------------|--------------------|----------|
| Grand Gulf Nuclear Station, Unit 1 | 05000-416  | YEAR           | SEQUENTIAL<br>NUMBER | REVISION<br>NUMBER | 3 OF 7   |
|                                    |            | 2000           | 001                  | 00                 |          |

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

Since the "LDS Trouble" alarm has no reflash capability, having this alarm malfunction would have masked any valid alarm signal due to drywell floor drain sump leakage. The leakage computer point was not affected, and was checked when the alarm first came in. The requirements of TS 3.4.5 for Reactor Coolant System (RCS) Operational Leakage were met throughout the event. Except for the alarm function, the remainder of the calculation process for drywell floor drain sump leakage remained operable throughout this event.

The drywell atmospheric particulate and the atmospheric gaseous monitoring fission product monitoring system became inoperable briefly due to surveillance being performed. Surveillance 06-OP-1D23-Q-0001-01 required stroking of valves which caused drywell atmospheric particulate and the atmospheric gaseous monitoring fission product monitoring system to become inoperable for about 14 minutes, requiring entry into LCO 3.4.7, Conditions B and D.

At about 0900 on June 29, 2000, the shift was informed that the "Q" MUX power supply failure, that had been ongoing, had the potential to render the alarm "LDS Trouble" inoperable. At this time, further discussions began regarding the malfunction of an alarm on system operability. After discussions with Licensing, CR-GGN-2000-931 was initiated for a formal evaluation of the issue. Licensing subsequently concluded that the alarm is required for system operability, and that LCO 3.0.3 entry conditions were met on June 28, 2000 between 1410 to 1424. Specifically, failure of the LDS Trouble alarm meant we did not meet the CHANNEL FUNCTIONAL TEST Surveillance Requirement (SR) 3.4.7.2. Failure to meet SR 3.4.7.2 meant the drywell floor drain sump monitoring system was inoperable. Combined with the other inoperable Reactor Coolant System (RCS) Leakage Detection Instrumentation, LCO 3.4.7, Condition F should have been entered for 14 minutes, which requires immediate entry into LCO 3.0.3.

**D. Apparent Cause**

The apparent cause is procedural guidance was less than adequate to identify the "LDS Trouble" alarm on 1H13P680 as being a Technical Specification required alarm and thus required for OPERABILITY of the drywell floor drain sump monitoring system per TS 3.4.7. In December 1999, an existing LDS Trouble Alarm was tied to a new computer point which monitors drywell floor drain leakage. Use of the LDS Trouble alarm using the new computer point was procedurally addressed, however, the LDS Trouble alarm was not clearly identified as required for TS OPERABILITY.

Two procedures were revised to address the floor drain monitoring requirements, but did not provide enough guidance to lead onshift personnel to recognize that given the equipment status that existed on June 28, 2000, the LDS Trouble alarm was inoperable and LCO 3.4.7 Condition A should have been entered. These procedures are the Alarm Response Instructions and the Drywell Floor Drain Sump Level Switch Functional Test (06-IC-1P45-M-0001). An additional procedure, Technical Specification Instrumentation Loop Logic, is used as an aid in clarifying logic functions and technical specification requirements for plant instrumentation. This procedure had not yet been revised to reflect the new alarm function installed in December 1999.

NRC FORM 366A

(6-1998)

U.S. NUCLEAR REGULATORY COMMISSION

**LICENSEE EVENT REPORT (LER)**

| FACILITY NAME (1)                         | DOCKET (2)       | LER NUMBER (6) |                   |                 | PAGE (3)      |
|---|------------------|----------------|-------------------|-----------------|---------------|
|   |                  | YEAR           | SEQUENTIAL NUMBER | REVISION NUMBER |               |
| <b>Grand Gulf Nuclear Station, Unit 1</b> | <b>05000-416</b> | <b>2000</b>    | <b>001</b>        | <b>00</b>       | <b>4 OF 7</b> |

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**E. Corrective Actions**

Immediate Corrective Actions:

CR 2000-0931 was initiated when it was realized that LCO 3.0.3 conditions were inadvertently entered. Since the entry conditions no longer existed at that time, no actual LCO report was written.

Long Term Corrective Actions:

- The following procedures will be reviewed and revised as necessary to clarify requirements for drywell floor drain sump monitoring operability to satisfy TS LCO 3.4.7.
  - 04-1-02-1H13-P680-4A1-E3, ALARM RESPONSE INSTRUCTION
  - 06-IC-1P45-M-0001, DRYWELL FLOOR DRAIN SUMP LEVEL SWITCH FUNCTIONAL TEST
  - 17-S-06-5, TECHNICAL SPECIFICATION INSTRUMENTATION LOOP LOGIC
- Details of this event will be discussed with operations onshift personnel to ensure requirements for operability of drywell floor drain monitoring are understood.

**F. Safety Assessment**

The described condition has no effect on core damage frequency as it does not impact potential core damage initiators or any of the systems that would be utilized for mitigation following potential initiators.

**G. Additional Information**

The applicable Technical Specification pages (3.4-16 through 3.4-18) have been attached to this LER for clarification purposes.

Energy Industry Identification System (EIS) codes are identified in the text within brackets [ ].

### 3.4 REACTOR COOLANT SYSTEM (RCS)

#### 3.4.7 RCS Leakage Detection Instrumentation

- LCO 3.4.7      The following RCS leakage detection instrumentation shall be OPERABLE:
- a. Drywell floor drain sump monitoring system;
  - b. One channel of either drywell atmospheric particulate or atmospheric gaseous monitoring system; and
  - c. Drywell air cooler condensate flow rate monitoring system.

APPLICABILITY:    MODES 1, 2, and 3.

#### ACTIONS

| CONDITION   | REQUIRED ACTION   | COMPLETION TIME   |
|---|---|-------------------|
| A. Drywell floor drain sump monitoring system inoperable.     | <p>-----NOTE-----<br/>LCO 3.0.4 is not applicable.<br/>-----</p> <p>A.1      Restore drywell floor drain sump monitoring system to OPERABLE status.</p> | 30 days           |
| B. Required drywell atmospheric monitoring system inoperable. | B.1      Analyze grab samples of drywell atmosphere.  | Once per 12 hours |

(continued)



ACTIONS (continued)

| CONDITION   | REQUIRED ACTION  | COMPLETION TIME                 |
|---|--|---------------------------------|
| C. Drywell air cooler condensate flow rate monitoring system inoperable.  | <p>-----NOTE-----<br/>Not applicable when the required drywell atmospheric monitoring system is inoperable.<br/>-----</p> <p>C.1 Perform SR 3.4.7.1.</p>   | Once per 8 hours                |
| <p>D. Required drywell atmospheric monitoring system inoperable.</p> <p><u>AND</u></p> <p>Drywell air cooler condensate flow rate monitoring system inoperable.</p> | <p>-----NOTE-----<br/>LCO 3.0.4 is not applicable.<br/>-----</p> <p>D.1 Restore required drywell atmospheric monitoring system to OPERABLE status.</p> <p><u>OR</u></p> <p>D.2 Restore drywell air cooler condensate flow rate monitoring system to OPERABLE status.</p> | <p>30 days</p> <p>30 days</p>   |
| E. Required Action and associated Completion Time of Condition A, B, C, or D not met.   | <p>E.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>E.2 Be in MODE 4.</p>  | <p>12 hours</p> <p>36 hours</p> |
| F. All required leakage detection systems inoperable.   | F.1 Enter LCO 3.0.3.   | Immediately                     |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE |  | FREQUENCY |
|--------------|--|-----------|
| SR 3.4.7.1   | Perform CHANNEL CHECK of required drywell atmospheric monitoring system.       | 12 hours  |
| SR 3.4.7.2   | Perform CHANNEL FUNCTIONAL TEST of required leakage detection instrumentation. | 31 days   |
| SR 3.4.7.3   | Perform CHANNEL CALIBRATION of required leakage detection instrumentation.     | 18 months |