



OCT 10 2005

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Serial No. 05-635
KPS/LIC/RR: RO
Docket No. 50-305
License No. DPR-43

DOMINION ENERGY KEWAUNEE, INC.
KEWAUNEE POWER STATION
LICENSEE EVENT REPORT 2005-014-01

Dear Sirs:

Pursuant to 10 CFR 50.73, Dominion Energy Kewaunee, Inc., hereby submits the following Licensee Event Report applicable to Kewaunee Power Station.

Report No. 50-305/2005-014-01

This report has been reviewed by the Plant Operating Review Committee and will be forwarded to the Management Safety Review Committee for its review.

If you have any further questions, please contact Rick Repshas at (920) 388-8217.

Very truly yours,

A handwritten signature in black ink, appearing to read "M. Gaffney".

Michael G. Gaffney
Site Vice President, Kewaunee Power Station

Attachment

Commitments made by this letter: NONE

JE22

cc: Mr. J. L. Caldwell
Administrator Region III
U.S. Nuclear Regulatory Commission
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

Mr. J. F. Stang
Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop O-8-H-4a
Washington, D. C. 20555

Mr. S. C. Burton
NRC Senior Resident Inspector
Kewaunee Power Station

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0066), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

FACILITY NAME (1)

Kewaunee Power Station

DOCKET NUMBER (2)

05000305

PAGE (3)

1 of 5

TITLE (4)

Technical Specification LCO Not Entered for Diesel Generators Inoperable While in Refueling Shutdown

| EVENT DATE (5) | | | LER NUMBER (6) | | | REPORT DATE (7) | | | OTHER FACILITIES INVOLVED (8) | |
|--------------------|-----|------|--|-------------------|---------------------|-----------------|----------------------|------|---|---------------|
| MO | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REV NO | MO | DAY | YEAR | FACILITY NAME | DOCKET NUMBER |
| 06 | 06 | 2005 | 2005 | -- 014 -- | 01 | 10 | 10 | 2005 | FACILITY NAME | DOCKET NUMBER |
| OPERATING MODE (9) | | N | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check all that apply) (11) | | | | | | | |
| POWER LEVEL (10) | | 000 | 20.2201(b) | | 20.2203(a)(3)(ii) | | 50.73(a)(2)(ii)(B) | | 50.73(a)(2)(ix)(A) | |
| | | | 20.2201(d) | | 20.2203(a)(4) | | 50.73(a)(2)(iii) | | 50.73(a)(2)(x) | |
| | | | 20.2203(a)(1) | | 50.36(c)(1)(i)(A) | | 50.73(a)(2)(iv)(A) | | 73.71(a)(4) | |
| | | | 20.2203(a)(2)(i) | | 50.36(c)(1)(ii)(A) | | 50.73(a)(2)(v)(A) | | 73.71(a)(5) | |
| | | | 20.2203(a)(2)(ii) | | 50.36(c)(2) | | 50.73(a)(2)(v)(B) | | OTHER Specify in Abstract below or in NRC Form 366A | |
| | | | 20.2203(a)(2)(iii) | | 50.46(a)(3)(ii) | | 50.73(a)(2)(v)(C) | | | |
| | | | 20.2203(a)(2)(iv) | | 50.73(a)(2)(i)(A) | | 50.73(a)(2)(v)(D) | | | |
| | | | 20.2203(a)(2)(v) | | X 50.73(a)(2)(i)(B) | | 50.73(a)(2)(vii) | | | |
| | | | 20.2203(a)(2)(vi) | | 50.73(a)(2)(i)(C) | | 50.73(a)(2)(viii)(A) | | | |
| | | | 20.2203(a)(3)(i) | | 50.73(a)(2)(ii)(A) | | 50.73(a)(2)(viii)(B) | | | |

LICENSEE CONTACT FOR THIS LER (12)

NAME

Richard Repshas

TELEPHONE NUMBER (Include Area Code)

(920) 388-8217

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO EPIX |
|-------|--------|-----------|--------------|--------------------|-------|--------|-----------|--------------|--------------------|
| | | | | | | | | | |

SUPPLEMENTAL REPORT EXPECTED (14)

| | | | | | | |
|--|---|----|-------------------------------|-------|-----|------|
| YES (If yes, complete EXPECTED SUBMISSION DATE). | X | NO | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
|--|---|----|-------------------------------|-------|-----|------|

ABSTRACT

On June 7, 2005 with the unit in refueling shutdown mode, it was identified that Technical Specification (TS) operability was not applied correctly for the impact of tornado missiles and wind on Emergency Diesel Generator (EDG) equipment. It was not recognized that one train of EDG equipment was required to support the Residual Heat Removal system (RHR) whenever the RHR system is required to be operable. Evaluations that were performed revealed tornado impacts on various EDG components could render the EDGs inoperable. At that time the RHR system should have been declared inoperable and a Limiting Condition for Operation entered. The initial operability concern was identified on March 24, 2005 for the EDG engine exhaust ductwork. On this date the EDGs were determined to be capable of starting and assuming bus loads. It was also determined that they were not required to be operable during the station's current plant mode of refueling shutdown. The cause of this event was a misinterpretation of TS for auxiliary electrical systems during specific plant modes. Once the EDGs were determined to be inoperable, both RHR trains should have been declared inoperable. The RHR trains were available providing decay heat removal and the EDGs were available as a support system for RHR. This occurrence does not constitute a safety system functional failure.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|------------------------|-------------------|----------------|----------------------|--------------------|----------|
| Kewaunee Power Station | 05000305 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 2 of 5 |
| | | 2005 | -- 014 | -- 01 | |

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

Event Description:

On June 7, 2005 with the unit in a refueling shutdown condition, it was identified that the Technical Specifications (TS) for the A and B Diesel Generator (EDG) [DG] operability were not applied correctly. The EDGs are required to support the Residual Heat Removal (RHR) [BP] system whenever the RHR system is required to be operable. Evaluations performed while the unit was in a refueling shutdown condition demonstrated tornado missile and wind impacts on various EDG components could render the EDGs inoperable. RHR was not declared inoperable and the Limiting Condition for Operation was not entered at this time. This report describes the failure to declare the EDG and RHR systems inoperable.

This issue was identified to the Licensee by the site Senior Resident Inspector.

An operability concern was identified on March 24, 2005 for the EDG engine exhaust ductwork [DUCT]. A walk-down was being conducted in the Kewaunee Power Station Turbine Building [NM], as part of an evaluation of the Turbine Building response to design basis tornado winds. As described in the Kewaunee Power Station Updated Safety Analysis Report (USAR) Appendix B, sections of sheet metal panel [PL] siding on the Turbine Building are designed to blow out / blow in due to tornado wind loading. However, loss of this siding would expose the Class 3 portion EDG exhaust ductwork to tornado wind loads. The response of the sheet metal panels would be that the ductwork could be subjected to full design basis tornado force. Exposure to tornado winds would likely result in deformation of the ductwork for each EDG possibly impacting EDG operation (reference Kewaunee Power Station LER 2005-005, Emergency Diesel Generator Exhaust Ductwork Not Adequately Protected from Potential Tornado Winds and Missiles).

At the time, the EDGs were determined to be capable of starting and assuming the current bus loads but not being required to be operable in the current plant mode (refueling shutdown) per TS 3.7.

Further evaluation was performed on April 19, 2005 and it was determined the EDG exhaust ductwork was also susceptible to turbine and tornado missiles. Again, it was identified that the EDGs were not required to be operable in the current plant conditions (refueling shutdown) and the issue required resolution prior to the unit exceeding hot shutdown condition.

A second EDG component issue was identified on June 1, 2005. A probabilistic tornado missile evaluation was performed for EDG fuel oil tank [TK] vent lines as part of an extent of condition review for equipment response to the design basis tornado winds. The initial results of the evaluation indicated all four vents could be struck and damaged by a tornado missile to the point they would adversely affect EDG operation. Deformation of the EDG fuel oil tank vent line could possibly restrict air flow to the tank leading to damage of the tank from the vacuum induced by the lowering fuel oil level. This could adversely affect the operation of the EDG.

Again, the EDGs were determined not to be required in the refueling shutdown mode in accordance with TS 3.7.

Subsequently, additional tornado missile analysis was performed for the EDG fuel oil tank vent lines using plant specific tornado hazard data. The revised evaluation indicated acceptable results.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|------------------------|-------------------|----------------|----------------------|--------------------|----------|
| Kewaunee Power Station | 05000305 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 3 of 5 |
| | | 2005 | -- 014 | -- 01 | |

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

Event Analysis and Safety Significance:

This condition is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), "Any operation or condition which was prohibited by the plant's Technical Specifications."

The mode applicability for TS 3.7, Auxiliary Electrical Systems, was misinterpreted. TS 3.7 applies to the availability of electrical power for the operation of plant auxiliaries to provide safe reactor operation and continuing availability of engineered safety features. It was assumed TS 3.7.c had the same mode applicability as TS 3.7.a, which is that the reactor shall not be made critical unless a specific number of electrical power supplies are available. TS 3.7 states the following:

3.7 Auxiliary Electrical Systems**APPLICABILITY**

Applies to the availability of electrical power for the operation of plant auxiliaries.

OBJECTIVE

To define those conditions of electrical power availability necessary to provide 1) safe reactor operation and 2) continuing availability of engineered safety features.

SPECIFICATION

- a. The reactor shall not be made critical unless all of the following requirements are satisfied:
1. The reserve auxiliary transformer is fully operational and energized to supply power to the 4160-V buses.
 2. A second external source of power is fully operational and energized to supply power to buses 1-5 and 1-6.
 3. The 4160-V buses 1-5 and 1-6 are both energized.
 4. The 480-V buses 1-52 and 1-62 and their MCCs are both energized from their respective station service transformers.
 5. The 480-V buses 1-51 and 1-61 are both energized from their respective station service transformers.
 6. Both station batteries and both DC systems are OPERABLE, except during testing and surveillance as described in TS 4.6.b.
 7. Both diesel generators are OPERABLE. The two underground storage tanks combine to supply at least 35,000 gallons of fuel oil for either diesel generator and the day tanks for each diesel generator contain at least 1,000 gallons of fuel oil.
 8. At least one pair of physically independent transmission lines serving the substation is OPERABLE. The three pairs of physically independent transmission lines are:
 - A. R-304 and Q-303
 - B. F-84 and Y-51
 - C. R-304 and Y-51

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|------------------------|-------------------|----------------|----------------------|--------------------|----------|
| Kewaunee Power Station | 05000305 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 4 of 5 |
| | | 2005 | -- 014 -- | 01 | |

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

- b. During power operation or recovery from inadvertent trip, any of the following conditions of inoperability may exist during the time intervals specified. If OPERABILITY is not restored within the time specified, then within 1 hour action shall be initiated to achieve HOT STANDBY within the next 6 hours.
1. Either auxiliary transformer may be out of service for a period not exceeding 7 days provided the other auxiliary transformer and both diesel generators are OPERABLE.
 2. One diesel generator may be inoperable for a period not exceeding 7 days provided the other diesel generator is tested daily to ensure OPERABILITY and the engineered safety features associated with this diesel generator are OPERABLE.
 3. One battery may be inoperable for a period not exceeding 24 hours provided the other battery and two battery chargers remain OPERABLE with one charger carrying the d-c supply system.
 4. If the conditions in TS 3.7.a.8 cannot be met, power operation may continue for up to 7 days provided at least two transmission lines serving the substation are OPERABLE.
 5. Three off-site power supply transmission lines may be out of service for a period of 7 days provided reactor power is reduced to 50% of rated power and the two diesel generators shall be tested daily for OPERABILITY.
 6. One 4160-V or 480-V engineered safety features bus may be out of service for 24 hours provided the redundant bus and its loads remain operable.
- c. When its normal or emergency power source is inoperable, a system, train or component may be considered OPERABLE for the purpose of satisfying the requirements of its applicable LIMITING CONDITION FOR OPERATION, provided:
1. Its corresponding normal or emergency power source is OPERABLE;
and
 2. Its redundant system, train or component is OPERABLE.

The intent of the specification is to follow TS 3.7.c during all modes of operation.

With the A and B EDGs inoperable due to potential susceptibility of tornado missiles and wind damaging the exhaust ductwork or fuel oil tank vents, the two RHR trains were also required to be declared inoperable. There was minimal safety significance as the RHR trains were available, although not operable due to the EDGs being inoperable as a result of the tornado design issues. Thus, RHR was providing decay heat removal and the EDGs were available at the time as a support system for RHR. Per TS 3.1.2.B.2: If one RHR train is inoperable, then corrective action shall be taken immediately to return it to the operable status. From March 24, 2005 actions were in progress to perform evaluations and implement modifications so the EDG systems would meet tornado protection.

This occurrence does not constitute a safety system functional failure.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|------------------------|-------------------|----------------|----------------------|--------------------|----------|
| Kewaunee Power Station | 05000305 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 5 of 5 |
| | | 2005 | -- 014 -- | 01 | |

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

Cause:

Wording of Technical Specification 3.7.c is contained within the diesel generator Technical Specification section 3.7, which led to the interpretation that the diesel generators are not required prior to criticality.

Corrective Actions:

1. On June 7, 2005 direction was provided to Operations Department personnel to follow TS section 3.7.c during all plant operating modes.
2. Following this direction on June 7, 2005, the EDGs were declared inoperable. Both trains of RHR were also declared inoperable.
3. An Operability/Technical Specification Committee has been formed to analyze future operability issues.
4. A corrective action has been initiated to clarify Technical Specification 3.7.
5. A request for training has been initiated to implement an operability training session in requalification training.

Similar Events:

A review of previous outages over the last three years did not identify the occurrence of any similar events.