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Fax: 440-280-8029December 15, 2011
L-11-380

10 CFR 50.73(a)(2)(i)(B)

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001.SUBJECT:
Perry Nuclear Power Plant, Unit 1
Docket No. 50-440, License No. NPF-58
Licensee Event Report Submittal

Enclosed is Licensee Event Report (LER) 2011-003, Switchyard Configuration During Startup Results in Operation Prohibited by Technical Specifications. There are no regulatory commitments contained in this submittal.

If there are any questions or if additional information is required, please contact Mr. Robert Coad, Manager – Regulatory Compliance, at (440) 280-5328.

Sincerely,



Vito A. Kaminskas

Enclosure:
LER 2011-003cc: NRC Project Manager
NRC Resident Inspector
NRC Region III

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: 80 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), 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.

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| 1. FACILITY NAME Perry Nuclear Power Plant, Unit 1 | 2. DOCKET NUMBER 05000-440 | 3. PAGE 1 OF 4 |
|--|--------------------------------------|--------------------------|

4. TITLE
Switchyard Configuration During Startup Results in Operation Prohibited by Technical Specifications

| 5. EVENT DATE | | | 6. LER NUMBER | | | 7. REPORT DATE | | | 8. OTHER FACILITIES INVOLVED | |
|---------------|-----|------|---------------|-------------------|---------|----------------|-----|------|------------------------------|---------------|
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REV NO. | MONTH | DAY | YEAR | FACILITY NAME | DOCKET NUMBER |
| 10 | 18 | 2011 | 2011 | - 003 | - 00 | 12 | 15 | 2011 | FACILITY NAME | DOCKET NUMBER |
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| 9. OPERATING MODE 2 | 11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) | | | | | | | | | | |
| | <input type="checkbox"/> 20.2201(b) | <input type="checkbox"/> 20.2203(a)(3)(i) | <input type="checkbox"/> 50.73(a)(2)(i)(C) | <input type="checkbox"/> 50.73(a)(2)(vii) | | | | | | | |
| 10. POWER LEVEL 000 | <input type="checkbox"/> 20.2201(d) | <input type="checkbox"/> 20.2203(a)(3)(ii) | <input type="checkbox"/> 50.73(a)(2)(ii)(A) | <input type="checkbox"/> 50.73(a)(2)(viii)(A) | | | | | | | |
| | <input type="checkbox"/> 20.2203(a)(1) | <input type="checkbox"/> 20.2203(a)(4) | <input type="checkbox"/> 50.73(a)(2)(ii)(B) | <input type="checkbox"/> 50.73(a)(2)(viii)(B) | | | | | | | |
| | <input type="checkbox"/> 20.2203(a)(2)(i) | <input type="checkbox"/> 50.36(c)(1)(i)(A) | <input type="checkbox"/> 50.73(a)(2)(iii) | <input type="checkbox"/> 50.73(a)(2)(ix)(A) | | | | | | | |
| | <input type="checkbox"/> 20.2203(a)(2)(ii) | <input type="checkbox"/> 50.36(c)(1)(ii)(A) | <input type="checkbox"/> 50.73(a)(2)(iv)(A) | <input type="checkbox"/> 50.73(a)(2)(x) | | | | | | | |
| | <input type="checkbox"/> 20.2203(a)(2)(iii) | <input type="checkbox"/> 50.36(c)(2) | <input type="checkbox"/> 50.73(a)(2)(v)(A) | <input type="checkbox"/> 73.71(a)(4) | | | | | | | |
| | <input type="checkbox"/> 20.2203(a)(2)(iv) | <input type="checkbox"/> 50.46(a)(3)(ii) | <input type="checkbox"/> 50.73(a)(2)(v)(B) | <input type="checkbox"/> 73.71(a)(5) | | | | | | | |
| <input type="checkbox"/> 20.2203(a)(2)(v) | <input type="checkbox"/> 50.73(a)(2)(i)(A) | <input type="checkbox"/> 50.73(a)(2)(v)(C) | <input type="checkbox"/> OTHER | | | | | | | | |
| <input type="checkbox"/> 20.2203(a)(2)(vi) | <input checked="" type="checkbox"/> 50.73(a)(2)(i)(B) | <input type="checkbox"/> 50.73(a)(2)(v)(D) | Specify in Abstract below or in NRC Form 366A | | | | | | | | |

12. LICENSEE CONTACT FOR THIS LER

| | |
|--|---|
| FACILITY NAME Robert Swartz, Compliance Engineer, Regulatory Compliance | TELEPHONE NUMBER (Include Area Code) (440) 280- 7664 |
|--|---|

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

| CAUSE | SYSTEM | COMPONENT | MANU-FACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANU-FACTURER | REPORTABLE TO EPIX |
|-------|--------|-----------|---------------|--------------------|-------|--------|-----------|---------------|--------------------|
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| 14. SUPPLEMENTAL REPORT EXPECTED | 15. EXPECTED SUBMISSION DATE | MONTH | DAY | YEAR |
| <input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE). <input type="checkbox"/> NO | | 03 | 01 | 2012 |

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

On October 18, 2011, at 0351 hours, the plant entered MODE 2 during plant startup. One of the two offsite power circuits required by Technical Specification (TS) 3.8.1, "AC Sources-Operating," was the delayed access circuit through the unit one auxiliary transformer. At 1619 hours, the manual disconnects for yard breakers S610 and S611 (isolation between offsite and onsite AC power distribution), were found to be open with danger tags installed. In this configuration, a TS Required Action was not performed within its designated Completion Time and a MODE change was made without satisfying the associated Limiting Condition for Operation (LCO). By 1730 hours, the danger tags were removed and the delayed access circuit was returned to OPERABLE status.

Preliminary findings of the ongoing root cause evaluation indicate that some switchyard and grid equipment required to maintain reliable sources of offsite power are not held to the same operational configuration standards required for plant controlled equipment. A supplemental report will be submitted after completion of the evaluation.

Corrective actions include completed and planned procedure revisions to ensure control room personnel are aware of switchyard configuration and training will be provided to appropriate plant personnel. The safety significance of this condition is considered to be low.

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

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

| 1. FACILITY NAME | 2. DOCKET | 6. LER NUMBER | | | 3. PAGE |
|---------------------------|-----------|---------------|-------------------|---------|---------|
| Perry Nuclear Power Plant | 05000-440 | YEAR | SEQUENTIAL NUMBER | REV NO. | 2 OF 4 |
| | | 2011 | -- | 003 | |

NARRATIVE

Energy Industry Identification System (EIIIS) codes are identified in the text as [XX].

INTRODUCTION

During plant startup on October 18, 2011, at 0351 hours, the plant entered MODE 2 (Startup). At 1619 hours, it was discovered that the manual disconnects [DISC] for yard breakers [BKR] S610 and S611 were open with danger tags installed. This switchyard configuration rendered one of two required offsite sources of power INOPERABLE.

Technical Specification (TS) Limiting Condition for Operation (LCO) 3.8.1 Condition A was entered for the loss of one source of offsite power. The manual disconnects were subsequently closed, restoring the second source of offsite power. During the time the manual disconnects were open, the delayed access circuit could not be credited for meeting TS LCO 3.8.1. The plant entered MODE 2 which was prohibited by TS LCO 3.0.4. While in MODE 2, before the disconnects were closed, TS LCO 3.8.1 was not met. This event 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 TS.

EVENT DESCRIPTION

On October 18, 2011, at 0012 hours, with the plant in MODE 4 (Cold Shutdown), surveillance instruction (SVI) SVI-R10-T5227 "Off-Site Power Availability Verification" was completed to meet Surveillance Requirement (SR) 3.8.1.1 "verify correct breaker alignment and indicated power availability for each required offsite circuit" for all MODEs. Completion of the SVI was to meet TS 3.8.1, "AC Sources-Operating," and establish that two sources of offsite power were OPERABLE. At 0351, the plant entered MODE 2.

On October 18, 2011, at 1619 hours, it was discovered that the manual disconnects for yard breakers S610 and S611 were open with danger tags installed. TS LCO 3.8.1 Condition A was entered for the loss of one source of offsite power. At 1646 hours, Required Action A.1, Perform surveillance requirement (SR) 3.8.1.1 for OPERABLE required offsite circuit, was completed. At 1659 hours, the manual disconnects for S611 were closed and by 1711 hours, the manual disconnects for S610 were closed. The second required source of offsite power became available upon closure of the four manual disconnects. At 1730 hours, the delayed access circuit was declared OPERABLE after verification of the switchyard lineup.

CAUSE OF EVENT

The ongoing root cause evaluation preliminarily determined that some switchyard and grid equipment required to maintain reliable sources of offsite power are not held to the same operational configuration standards required for plant controlled equipment. The program weakness had not previously manifested itself due to the working relationship between the switchyard coordinator and operations. The recent turnover of the switchyard coordinator position exposed the fact that configuration control of switchyard equipment was overly reliant upon individual expertise and experience rather than being process based.

Processes normally utilized to maintain configuration of plant controlled equipment include; the LCO/ Potential Limiting Condition for Operation (PLCO) process, the clearance program, procedures, and plant status control drawings. These processes were not considered applicable for use on equipment associated with offsite power supplies because the danger tagging activities, operation, and maintenance of this equipment was performed by non-station personnel.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

| 1. FACILITY NAME | 2. DOCKET | 6. LER NUMBER | | | 3. PAGE |
|---------------------------|-----------|---------------|-------------------|---------|---------|
| Perry Nuclear Power Plant | 05000-440 | YEAR | SEQUENTIAL NUMBER | REV NO. | 3 OF 4 |
| | | 2011 | -- 003 -- | 00 | |

NARRATIVE

EVENT ANALYSIS

During plant startup on October 18, 2011, with the plant in MODE 4, the unit one startup transformer [XFMR] [EA] was INOPERABLE. For operation in MODES 1, 2, or 3, the two required qualified circuits between the offsite transmission network and the onsite Class 1E AC Electric Power Distribution System were the unit 2 startup transformer and the backfeed lineup through the unit one auxiliary transformer (delayed access circuit). Use of the delayed access circuit was allowed by approved License Amendment No. 160 until December 12, 2011.

On October 18, 2011, at 0351 hours, the plant entered MODE 2. At 1619, it was discovered that the manual disconnects for yard breakers S610 and S611 were open. The license amendment considers specific manual actions necessary to align the delayed access circuit to the plant's safety buses. These actions are contained in ONI-SPI F-1, "Off-Site Power Restoration," and ONI-SPF F-2, "Yard Inspection." These procedures do not provide direction on restoration of the manual disconnects for yard breakers S610 and S611. Therefore, the delayed access circuit was not OPERABLE when the plant entered MODE 2.

On October 18, 2011, at 1711 hours, the four disconnects for yard breakers S610 and S611 were closed. SVI-R10-T5227 was completed by 1730 hours and the delayed access circuit was declared OPERABLE.

OPERABILITY requirements for two qualified offsite circuits between the offsite transmission network and the onsite Class 1E AC Electric Power Distribution System were not met for TS LCO 3.8.1 when the plant transitioned from MODE 4 to MODE 2. This was an operation prohibited by TS LCO 3.0.4 which prohibits MODE changes under certain conditions when an LCO is not met. In addition, between 0351 hours and 1711 hours on October 18, 2011, TS LCO 3.8.1 Required Action F.1 (be in MODE 3, Hot Shutdown, in 12 hours) was not met.

This event has no quantitative change in the current core damage frequency as the Probabilistic Risk Assessment (PRA) model does not model the availability of the backfeed lineup for power restoration purposes.

From the qualitative probabilistic risk perspective, the additional time that would have been required to re-establish this backfeed alignment is viewed to have a non-risk significant effect as re-establishment of the offsite power through this source would not have prevented the transient or would have been utilized as part of the initial mitigating strategy. This alignment would most likely be utilized in the event of a loss of the remaining startup transformer. Had this failure occurred within the timeframe involved, all emergency diesel generators were available and would have been expected to provide onsite AC power. Re-establishment of offsite power in this event would not have been time critical or risk significant. Based on this analysis, this event is viewed as having low safety significance.

CORRECTIVE ACTIONS

A daily surveillance requirement check was established to check the position of the disconnect switches associated with the breakers in the yard. The check was performed twice per day when the delayed access circuit was relied upon as a qualified offsite source of power.

SVI-R10-T5227 was revised to add checks of components on the switchyard side of the main transformers when qualifying the auxiliary transformer as a delayed source.

Operations Night Order, "Switchyard Clearance and Switching Orders," was issued to ensure control

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

| 1. FACILITY NAME | 2. DOCKET | 6. LER NUMBER | | | 3. PAGE |
|---------------------------|-----------|---------------|-------------------|----------|---------|
| Perry Nuclear Power Plant | 05000-440 | YEAR | SEQUENTIAL NUMBER | REV. NO. | 4 OF 4 |
| | | 2011 | -- 003 -- | 00 | |

NARRATIVE

room personnel have a complete understanding of switchyard configuration.

Operations Administrative Instruction (OAI) OAI-1701, Tracking of LCOs, will be revised to provide specific guidance to generate an LCO if the alignment of switchyard components impacts (or has the potential to impact) the operability of an off-site power source.

Licensed operators and shift engineers will be trained to Nuclear Operating Procedure (NOP) NOP-OP-1003, Grid Reliability Protocol, as it relates to the importance of knowing the status of offsite power sources and related TS.

Licensed operators and staff that process mode restraints will be trained to this event and lessons learned to prevent the reoccurrence of closing a mode restraint prior to the issue being completely resolved.

Plant Equipment Rounds will be revised to include a daily inspection of the transmission yard.

PREVIOUS SIMILAR EVENTS

A review of Licensee Event Reports and the corrective action database for the past three years determined that two similar events had occurred.

LER 2010-002, Piping Leak Results in Condition Prohibited by Technical Specifications, documented a leak on the Emergency Closed Cooling Water subsystem B (ECCW B) [CC]. When ECCW B was declared INOPERABLE, the completion time for TS LCO 3.7.10 "ECCW System," Condition B had been exceeded. This was a condition prohibited by TS.

The corrective actions associated with this event focused on revision of the prompt operability determination process and training on the event. These corrective actions would not have reasonably been expected to have prevented the event documented in LER 2011-003.

LER 2011-002, Condition Prohibited by Technical Specifications and Plant Shutdown due to Unit 1 Startup Transformer Issues, documented two issues associated with the unit one startup transformer. The issues were the inappropriate use of a delayed access circuit as a qualified source of offsite power and a transformer failure that resulted in a plant shutdown.

The corrective actions associated with these events focused on a license amendment and TS Bases revision to clarify available qualified sources of offsite power and replacement of the unit 1 startup transformer. These corrective actions would not have reasonably been expected to have prevented the event documented in LER 2011-003.

COMMITMENTS

There are no regulatory commitments contained in this report. Actions described in this document represent intended or planned actions, are described for the NRC's information, and are not regulatory commitments.