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 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397
 AUTH. NAME: AUTHOR AFFILIATION
 DAVISON, W.S. Washington Public Power Supply System
 RECIP. NAME: RECIPIENT AFFILIATION

SUBJECT: LER 88-036-00: on 881118, potential inconsistency between Tech
 Spec. & channel functional test surveillance procedure noted.
 W/8 ltr.

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LICENSEE EVENT REPORT (LER)

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| FACILITY NAME (1) Washington Nuclear Plant - Unit 2 | | | | | | | | | | DOCKET NUMBER (2) 0 5 0 0 0 3 9 7 | | | | | | | | | | PAGE (3) 1 OF 0 5 | | |
| TITLE (4) Failure To Perform Division One 4.16 KV Emergency Bus Undervoltage Degraded Voltage Protection Technical Specification Surveillance | | | | | | | | | | | | | | | | | | | | | | |
| EVENT DATE (5) | | | LER NUMBER (6) | | | | REPORT DATE (7) | | | OTHER FACILITIES INVOLVED (8) | | | | | | | | | | | | |
| MONTH | DAY | YEAR | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | MONTH | DAY | YEAR | FACILITY NAMES | | | | | | DOCKET NUMBER(S) | | | | | | | |
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| 1 1 | 1 8 | 8 8 | 8 8 | 0 3 6 | 0 0 | 1 2 | 1 9 | 8 8 | | | | | | | 0 5 0 0 0 | | | | | | | |
| OPERATING MODE (9) | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11) | | | | | | | | | | | | | | | | | | | | |
| 1 | | 20.402(b) | | | | 20.405(c) | | | | 50.73(a)(2)(iv) | | | | 73.71(b) | | | | | | | | |
| POWER LEVEL (10) | | 20.405(a)(1)(i) | | | | 50.36(c)(1) | | | | 50.73(a)(2)(v) | | | | 73.71(c) | | | | | | | | |
| 1 0 1 0 | | 20.405(a)(1)(ii) | | | | 50.36(c)(2) | | | | 50.73(a)(2)(vii) | | | | OTHER (Specify in Abstract below and in Text, NRC Form 366A) | | | | | | | | |
| 20.405(a)(1)(iii) | | | | 50.73(a)(2)(i) | | | | 50.73(a)(2)(viii)(A) | | | | | | | | | | | | | | |
| 20.405(a)(1)(iv) | | | | 50.73(a)(2)(ii) | | | | 50.73(a)(2)(viii)(B) | | | | | | | | | | | | | | |
| 20.405(a)(1)(v) | | | | 50.73(a)(2)(iii) | | | | 50.73(a)(2)(ix) | | | | | | | | | | | | | | |
| LICENSEE CONTACT FOR THIS LER (12) | | | | | | | | | | | | | | | | | | | | | | |
| NAME | | | | | | | | | | TELEPHONE NUMBER | | | | | | | | | | | | |
| W.S. Davison, Compliance Engineer | | | | | | | | | | AREA CODE | | 5 1 0 9 3 1 7 7 1 - 1 2 1 5 1 0 1 1 | | | | | | | | | | |
| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) EXT. 2726 | | | | | | | | | | | | | | | | | | | | | | |
| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPROS | | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPROS | | | | | | | | | | | | |
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| SUPPLEMENTAL REPORT EXPECTED (14) | | | | | | | | | | EXPECTED SUBMISSION DATE (15) | | MONTH | | DAY | | YEAR | | | | | | |
| X YES (If yes, complete EXPECTED SUBMISSION DATE) | | | | | | | | | | NO | | 0 1 1 | | 3 1 0 | | 8 1 9 | | | | | | |

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On November 18, 1988, a self initiated Safety System Functional Inspection (SSFI) being performed by the Supply System Engineering Assurance Organization revealed an potential inconsistency between the Channel Functional Test Surveillance Procedure and the Technical Specification requirement for the Division One 4.16 KV Emergency Bus Undervoltage Degraded Voltage (Second Level Undervoltage) protection circuitry. A Nonconformance Report was written to document this condition and initiate further evaluation. On November 21, 1988, further evaluation of this condition resulted in the determination that the Channel Calibration for the Division One Second Level Undervoltage 3 second time delay relay (E-RLY-27/S7/UV) had not been performed within the 18 month frequency required by Plant Technical Specification Table 4.3.3.1-1 Section D.2.

After evaluation and direction by Plant Management, the circuitry was declared inoperable, calibrated and then returned to service. The root causes have not been completely developed at this time. This event posed no threat to the safety of Plant personnel or the public.

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| Washington Nuclear Plant - Unit 2 | 0 5 0 0 0 3 9 7 | 8 8 | 0 3 6 | 0 0 | 0 2 | OF | 0 5 |

TEXT (If more space is required, use additional NRC Form 368A's) (17)

Plant Conditions

- a) Power Level - 100%
- b) Plant Mode - 1 (Power Operation)

Event Description

On November 18, 1988, a self initiated Safety System Functional Inspection (SSFI) being performed by the Supply System Engineering Assurance Organization revealed a potential inconsistency between the Channel Functional Test Surveillance Procedure and the Technical Specification requirement for the Division One 4.16 KV Emergency Bus Undervoltage Degraded Voltage (Second Level Undervoltage) protection circuitry. A Nonconformance Report was written to document this condition and initiate further evaluation. On November 21, 1988, further evaluation of this condition resulted in the determination that the Channel Calibration for the Division One Second Level Undervoltage 3 second time delay relay (E-RLY-27/S7/UV) had not been performed within the 18 month frequency required by Plant Technical Specification Table 4.3.3.1-1 Section D.2.

Immediate Corrective Action

Significant discussions concerning a discretionary enforcement request occurred between the Supply System staff, NRC Region Five staff and NRR during the morning and early afternoon of November 21, 1988. For the purposes of this LER, however, the reportable event occurred at 1400 hours when Technical Specification Section 3.0.3 was entered.

On November 21, 1988, after evaluation and direction by Plant Management, the following actions were taken by WNP-2 Plant Staff:

1400 hours - Division One Second Level Undervoltage System was declared inoperable and WNP-2 Technical Specification L.C.O. Action Statement 3.0.3 was entered. An Emergency Classification of Unusual Event was declared.

1459 hours - With initial plant power level at 100 percent, plant operators began power reduction in preparation to shut down the plant in accordance with the requirements of the WNP-2 Technical Specifications.

1510 hours - The channel calibration for the Division One Second Level Undervoltage 3 second time delay relays was started.

1755 hours - The Division One channel calibration was completed satisfactorily.

1800 hours - The Division One 4.16 KV Second Level Undervoltage circuit was declared operable. The plant power reduction was halted at 89%.

1925 hours - Technical Specification Action Statement 3.0.3 was exited and the Emergency Classification of Unusual Event was terminated.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 368A's) (17)

Further Evaluation and Corrective Action

Further Evaluation

1. This event is being reported as a "condition prohibited by the plants Technical Specification" per the requirements of 10CFR50.73(a)(2)(i)(B).
2. The root causes for this event have not been completely developed at this point. The following preliminary cause information is presented as status on the root cause determination effort. Additional information will be provided in a supplemental report:
 - o Procedure Failure - Prior to initial fuel load and plant licensing in December of 1983, discussions were held between WNP-2 and the Nuclear Reactor Regulations branch of the NRC concerning the time delay design for Division One, Two and Three Second Level Undervoltage protection schemes. The WNP-2 staff interpretation was that the extent to which the channels were testable was previously approved and defined by the channel design. The 3 second time delay relays and the Division Three Second Level Undervoltage circuitry were subsequently not included in any Technical Specification Surveillance procedures for channel calibration or functional testing. They were both included in the Logic System Functional Tests which are performed on an annual basis.
 - o Management System Error - The discussions with NRR were not documented nor was there any defined method to accomplish this. As a result of this less than adequate management system process, the Technical Specification Surveillances procedures may not have been adequately written to accomplish these particular requirements of the WNP-2 Technical Specifications. The Supply System has since developed a Technical Specification interpretation procedure which requires Plant Operations Committee approval to implement an interpretation.
3. Both the Division One and Division Two Second Level Undervoltage 3 Second Time Delay Relay Calibrations have been previously controlled via the plants non-Technical Specification Surveillance Testing Program at two year required intervals. The Division Two Second Level Undervoltage 3 Second Time Delay Relays did not require calibration because they had been calibrated during the 1987 annual refueling outage via the non-Technical Specification Testing Program. The Division One Surveillance was scheduled for the 1988 annual outage but was deferred for performance during the 1989 outage. Prior to the performance on November 21, 1988, the Division One Second Level Undervoltage 3 second time delay relay had not been calibrated since initial plant startup.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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4. The Division One (and Division Two) Second Level Undervoltage protection consists of three ITE static type definite time undervoltage relays and three secondary time delay (3 second) relays. The undervoltage relays monitor the three phases of the 4160 volt emergency busses. These three relays each provide two contacts which contribute to a two out of three logic array. The relays are set to actuate at approximately 87.3% of nominal bus voltage and will change the state of their contacts following a 5 second time delay. Actuation (contact closure) of two of these relays will energize two of three secondary time delay (3 second) relays. These three second time delay relays contribute to the total eight second time delay referenced in the WNP-2 FSAR and the Technical Specification. They are the end-point relays which actuate circuit breaker movement, alarms and other functions.

5. On December 2, 1988, during subsequent evaluation of the Division One 4.16 KV Emergency Bus Second Level Undervoltage event, a possible inconsistency was discovered concerning the Technical Specification surveillance requirements for the Division Three 4.16 KV Emergency Bus Second Level Undervoltage circuitry. The Division Three circuitry is not specifically called out in Technical Specification Table 3.3.3-1, ECCS Minimum Channels Required, nor listed in Table 4.3.3-1, ECCS Surveillance Requirements. Its setpoint is, however, listed in Table 3.3.3-2, ECCS Actuation Setpoints.

On December 2, 1988, during a plant outage, the Division 3 Second Level Undervoltage Channel Calibration Test was successfully performed per the requirements of the WNP-2 Technical Specifications.

Further Corrective Action

1. WNP-2 is currently involved in discussion with NRR and NRC Region Five Staff concerning this issue. An emergency Technical Specification amendment with a Safety Analysis is being submitted to clarify the testing requirements. Included in this discussion is the exclusion of the Division Three circuitry from the Channel Functional Test requirement due to the inability to test this circuit during power operation without loss of the circuit protective function and without the use of jumpers to place the logic in a tripped condition. The emergency Technical Specification change will address the Division One, Two and Three Technical Specification surveillance requirements.
2. Channel Calibration Technical Specification Surveillance procedures have been revised to include the Division One and Division Two 3 second time delay relays.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

Safety Significance

Upon notification by NRC Region Five staff that a plant shutdown must be initiated absent of formal receipt of discretionary enforcement, the Division One Second Level Undervoltage circuitry was declared inoperable and, appropriate action was taken to place the plant in the condition specified by the Technical Specifications. The Division Two Second Level Undervoltage circuitry was operable during this entire period of time, therefore the redundant Division Two 4.16 KV Emergency Bus was capable of performing all of the functions required to establish safe shutdown during accident conditions. Normal Onsite and Offsite electrical power distribution systems were operable during this event. This event posed no threat to the safety of Plant personnel or the public.

Similar Events

None

EIIS Information

Text Reference

EIIS Reference

| | System | Component |
|---|--------|-----------|
| Division One/Two/Three 4.16 KV Emergency Bus Undervoltage Degraded Voltage Protection Circuitry | EA | 27 |
| E-RLY-27/S7/UV | EA | 27 |
| 3 Second Time Delay Relay | EA | 2 |



WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

Docket No. 50-397

December 19, 1988

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

Subject: NUCLEAR PLANT NO. 2
LICENSEE EVENT REPORT NO. 88-036

Dear Sir:

Transmitted herewith is Licensee Event Report No. 88-036 for the WNP-2 Plant. This report is submitted in response to the report requirements of 10CFR50.73 and discusses the items of reportability, corrective action taken, and action taken to preclude recurrence.

Very truly yours,

C.M. Powers (M/D 927M)
WNP-2 Plant Manager

CMP:lg

Enclosure:

Licensee Event Report No. 88-036

cc: Mr. John B. Martin, NRC - Region V
Mr. C.J. Bosted, NRC Site (M/D 901A)
INPO Records Center - Atlanta, GA
Ms. Dottie Sherman, ANI
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