

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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| FACILITY NAME (1) SUSQUEHANNA STEAM ELECTRIC STATION - UNIT 1 | DOCKET NUMBER (2) 0 5 0 0 0 3 8 7 1 | PAGE (3) 1 OF 0 4 |
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TITLE (4)
Failure To Correct Instrument Drift Condition Within Tech Spec Required Action Time

| 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) | | | | | | | | | | | |
| 0 | 5 | 2 | 6 | 9 | 3 | 9 | 3 | — | 0 | 0 | 6 | — | 0 | 0 | 0 | 6 | 2 | 5 | 9 | 3 | SSES - Unit 2 | 0 5 0 0 0 3 8 8 |
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| OPERATING MODE (9) 1 | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11) | | | | | | | | | |
| POWER LEVEL (10) 1 0 0 | <input type="checkbox"/> 20.402(b) | <input type="checkbox"/> 20.405(c) | <input type="checkbox"/> 50.73(a)(2)(iv) | <input type="checkbox"/> 73.71(b) | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(i) | <input type="checkbox"/> 50.38(c)(1) | <input type="checkbox"/> 50.73(a)(2)(v) | <input type="checkbox"/> 73.71(c) | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(ii) | <input type="checkbox"/> 50.38(c)(2) | <input type="checkbox"/> 50.73(a)(2)(vi) | OTHER (Specify in Abstract below and in Text, NRC Form 366A) | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(iii) | <input checked="" type="checkbox"/> 50.73(a)(2)(i) | <input type="checkbox"/> 50.73(a)(2)(viii)(A) | | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(iv) | <input type="checkbox"/> 50.73(a)(2)(ii) | <input type="checkbox"/> 50.73(a)(2)(viii)(B) | | | | | | | |
| | <input type="checkbox"/> 20.405(a)(1)(v) | <input type="checkbox"/> 50.73(a)(2)(iii) | <input type="checkbox"/> 50.73(a)(2)(ix) | | | | | | | |

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| LICENSEE CONTACT FOR THIS LER (12) | | TELEPHONE NUMBER | |
| NAME R. R. Wehry, Power Production Engineer - Compliance | | AREA CODE 7 1 7 | 5 4 2 - 3 6 6 4 |

| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) | | | | | | | | | | | |
|--|--------|-----------|--------------|---------------------|--|-------|--------|-----------|--------------|---------------------|--|
| 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 |
| <input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) | <input checked="" type="checkbox"/> NO | | | | |

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

On May 26, 1993, an evaluation of an Emergency Diesel Generator (EDG) fuel oil storage tank level instrument's location, function and tolerance, and a review of surveillance test documentation from December 19, 1991 through July 20, 1992 concluded that a noncompliance with the plant's Technical Specifications occurred. Namely, a calibration check performed on July 20, 1992, via a corrective maintenance work authorization, determined that the level indicating instrument for the 'C' EDG fuel oil storage tank had drifted in a nonconservative direction. The work authorization had been initiated on December 23, 1991 to investigate why a low level alarm was present when the tank level indicated greater than the low alarm level setpoint. Due to a lack of clear understanding of instrument design and tolerance, improper direction in the alarm response procedure, and improper prioritization by the work groups involved, the work authorization was not implemented until July 20, 1992. The evaluation concluded that several times during the period from December 19, 1991 to July 20, 1992, the fuel oil tank fuel volume may have been less than the Technical Specification required minimum volume by up to approximately 200 gallons. The instrument was recalibrated and verified to indicate properly. Training was conducted to stress the importance of timely identification and proper prioritization of plant problems. The associated alarm response procedure was revised to require the addition of fuel oil to the storage tank upon receipt of the low level alarm and operating procedures are being enhanced to provide clarification of actual levels when alarms are received and the margins to Tech Spec limits at those levels and to utilize the higher accuracy alarm instruments during tank filling evolutions.

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

DESCRIPTION OF EVENT

On May 26 1993, an evaluation of a level instrument's location, function and tolerance, and a review of surveillance test documentation from December 19, 1991 through July 20, 1992 concluded that a noncompliance with the plant's Technical Specifications occurred. Namely, a calibration check, which had been performed on July 20, 1992, via a corrective maintenance work authorization, determined that the level indicating instrument for the 'C' Emergency Diesel Generator (EDG) fuel oil storage tank (EIIS Code: DC) had drifted in a nonconservative direction. The 'C' EDG fuel oil storage tank low level alarm had annunciated on December 19, 1991 during performance of a monthly surveillance run on the 'C' EDG. Per the alarm response procedure, the operator observed the storage tank level indication to be 96.9% level. The low level alarm setpoint is 94.3% level. A work authorization identifying the annunciator as alarming, with an indicated level of 96.9% level, was initiated by operations personnel on December 23, 1991. However, operations shift personnel did not assign any priority code to the work authorization. A low (routine) priority code (i.e., during the next scheduled 'C' EDG work window) was assigned by the work group (Instrumentation and Controls). Unknown to plant personnel, the 'C' EDG fuel oil storage tank level transmitter had drifted in a non-conservative direction. A calibration check performed on July 20, 1992 determined that the level indicating transmitter for the 'C' EDG fuel oil storage tank had a zero shift of 3.7% high. The resulting condition, indicated level higher than actual level, was a non-conservative condition. The evaluation concluded that the 'C' EDG fuel oil storage tank actual fuel oil volume may have been less than the required Technical Specification minimum volume several times during the period from December 19, 1991 to July 20, 1992.

CAUSE OF EVENT

This incident was caused by instrument drift, a lack of clear proceduralized guidance and understanding of design and tolerances for the EDG fuel oil storage tank instruments for level indication and low level alarm, improper direction in the alarm response procedure, and improper prioritization of the work authorization for investigating the alarm/indication discrepancy. The 'C' EDG fuel oil storage tank low level alarm annunciated on December 19, 1991 during a performance of a monthly surveillance run on the 'C' EDG. The alarm response procedure directed the operator (non-licensed) to check the level indication instrument. A reading of 96.9% was observed. The low level alarm setpoint is 94.3% level. A work authorization on the instrument for the alarm identifying the annunciator as alarming, with an indicated level of 96.9% level, was initiated by operations personnel on December 23, 1991. Operations shift supervision (licensed) did not assign a priority code to the work authorization, however, contrary to the administrative procedure. When the work authorization was received by the Instrument and Controls section (non-licensed), it was assigned a low (routine) priority code and was not implemented until July 20, 1992.

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

REPORTABILITY/ANALYSIS

This event was determined reportable as a condition prohibited by the plant's Technical Specifications per 10CFR50.73(a)(2)(i)(B), in that the drifting of an instrument out of its acceptable range and failure to implement the ACTIONS of the Technical Specifications within the time required (1 hour), resulted in an EDG fuel oil storage tank fuel oil volume being less than that required by the Technical Specifications (47,570 gallons; 93.6% level). Namely, a calibration check performed on July 20, 1992, via a corrective maintenance work authorization, determined that the level indicating instrument for the 'C' EDG fuel oil storage tank had drifted in a nonconservative direction. The 'C' EDG fuel oil storage tank low level alarm had annunciated on December 19, 1991 during performance of a monthly surveillance run on the 'C' EDG. A work authorization identifying the annunciator as alarming, with an indicated level of 96.9% level, had been initiated by operations personnel on December 23, 1991, but was not implemented until July 20, 1992.

An evaluation of instrumentation location, function and tolerance, and a review of surveillance test documentation for the time period from December 19, 1991 through July 20, 1992 was completed on May 26, 1993 and concluded that when the conservative, as-found instrument error was subtracted from the actual levels recorded during the surveillances, a noncompliance with the Technical Specification required minimum fuel oil volume occurred several times during this time period. The actual fuel volume at the lowest recorded indicated level may potentially have been up to approximately 200 gallons less than that required by the Technical Specifications.

There were no safety consequences or compromise to public health and safety as a result of this event. The Technical Specification required fuel oil volume for the EDG fuel oil storage tank is 47,570 gallons (93.6% level) to provide for the design requirement of fuel oil for at least seven days of operation. Conservative calculations showed that the level remained greater than 92.9% level during the time period in which the level instrument calibration was in question. Fuel oil transfer capability from the 'E' EDG fuel oil storage tank, which is a fifth and spare fuel oil storage tank at Susquehanna, remained available throughout the subject period. Additionally, a review of FSAR Table 8.3 required loading and actual fuel consumption data for the 'C' EDG confirmed that even with the approximately 200 gallons less than the required Technical Specification volume, there would have been sufficient fuel oil to provide for 7 day operation with the full complement of Engineered Safety Feature loads applied.

In accordance with the guidance provided in NUREG 1022, Supplement 1, item 14.1, the required submission date for this report was determined to be June 25, 1993.

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CORRECTIVE ACTION

The level indicating transmitter was calibrated and proper function and indication was verified. Additional investigations and data collection to determine the cause of level transmitter drift are continuing in an effort to enhance storage tank level indication.

Training was conducted for all operations shift personnel. This training reviewed the event and stressed the importance of timely identification of plant problems and the need to assign priority to work documents commensurate with the significance or potential significance of the identified problem.

The associated alarm response procedure was revised to require the addition of fuel oil to the storage tank upon receipt of the low level alarm as an additional conservative action.

Operating procedures are being enhanced to provide clarification of actual storage tank levels when alarms are received and the margins to Technical Specification limits at those levels and to utilize the higher accuracy alarm instrumentation during tank filling evolutions. Training will be conducted for Operations and Instrumentation and Controls personnel on the procedure changes which are made.

ADDITIONAL INFORMATION

Failed Component Identification: Not applicable.

Previous Similar Events: No similar events identified.