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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light Co 05000250
 AUTH. NAME AUTHOR AFFILIATION
 HANEK, O.I. Florida Power & Light Co.
 PLUNKETT, T.F. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-003-00: on 920322, discovered that plant operated w/o proper transmitter calibr prior to 910826, per NRC Info Notice 91-075. Caused by inadequate procedures. Calibr procedures will be revised. W/920422 ltr.

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APR 22 1992

L-92-113
10 CFR 50.73

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

Gentlemen:

Re: Turkey Point Unit 3 and 4
Dockets No. 50-250 and 50-251
Reportable Event: 92-003-00
Date of Event: March 23, 1992
Operation With Improper Pressure
Transmitter Calibration

The attached Licensee Event Report is being provided, pursuant to the requirements of 10 CFR 50.73, to provide information on the subject event.

Very truly yours,

T. F. Plunkett by G. W. Pearce

T. F. Plunkett
Vice President
Turkey Point Nuclear

TFP\OIH

Attachment

cc: Stewart D. Ebner, Regional Administrator, Region II, USNRC
R. C. Butcher, Senior Resident Inspector, USNRC, Turkey Point
Plant

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LICENSEE EVENT REPORT (LER)

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|--|--------------------------------------|----------------------|----------------|
| FACILITY NAME (1) TURKEY POINT UNITS 3 AND 4 | DOCKET NUMBER (2) 05000250 | PAGE (3) 1 | OF 5 |
|--|--------------------------------------|----------------------|----------------|

TITLE (4) **Operation With Improper Pressure Transmitter Calibration**

| EVENT DATE (5) | | | LER NUMBER(6) | | | RPT DATE (7) | | | OTHER FACILITIES INV. (8) | | |
|----------------|-----|----|---------------|-------|----|--------------|-----|----|---------------------------|--|--------------|
| MON | DAY | YR | YR | SEQ # | R# | MON | DAY | YR | FACILITY NAMES | | DOCKET # (S) |
| 03 | 23 | 92 | 92 | 003 | 00 | 04 | 22 | 92 | | | |

| | | |
|-----------------------------------|------------|--|
| OPERATING MODE (9) 1/1 | 1/1 | <u>10 CFR 50.73(a)(2)(i)</u> <u>10 CRF 50.73(a)(2)(ii)(B)</u> |
| POWER LEVEL (10) 87/100 | | |

LICENSEE CONTACT FOR THIS LER (12)

| | |
|-----------------------------------|---|
| Olga I. Hanek, Licensing Engineer | TELEPHONE NUMBER 305-246-6607 |
|-----------------------------------|---|

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

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | NPRDS? | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | NPRDS? |
|-------|--------|-----------|--------------|--------|-------|--------|-----------|--------------|--------|
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|---|-------------------------------|--------------------|------------------|-------------------|
| SUPPLEMENTAL REPORT EXPECTED (14) NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> | EXPECTED SUBMISSION DATE (15) | MONTH 06 | DAY 01 | YEAR 92 |
| (if yes, complete EXPECTED SUBMISSION DATE) | | | | |

ABSTRACT (16)

In response to NRC Information Notice 91-75, "Static Head Corrections Not Included in Pressure Transmitter Calibration Procedures", issued by the NRC on November 25, 1991, a review of the Turkey Point Units 3 and 4 calibration procedures revealed that the static head correction was not considered in some pressure transmitter calibration procedures. On March 23, 1992, FPL concluded that, after including the static head correction, Turkey Point Units 3 and 4 are operating in accordance with the current Technical Specifications.

However, without inclusion of static head corrections in some pressure transmitter calibration procedures, operations were not in accordance with the old Technical Specifications in effect prior to August 26, 1991, in the following areas:

1. Technical Specification 2.3, Limiting Safety System Settings, Protective Instrumentation , Pressurizer: Low Pressurizer Pressure Reactor Trip - equal to or greater than 1835 psig. The effect of a static head correction on this setpoint is under evaluation. FPL has not determined if the Safety Analysis was actually exceeded. An engineering analysis determining if the Safety Analysis limit of a pressurizer pressure of 1790 psig was exceeded will be completed and details of these results will be included in a supplement to this Licensee Event Report by June 1, 1992.
2. Technical Specification 3.5, Instrumentation, Table 3.5-4, Engineered Safety Feature Setpoints: Item 3. Pressurizer Low Pressure Safety Injection Actuation setpoint greater than or equal to 1715 psig; and Item 5. Safety Injection Actuation on a high steam line flow coincident with a low steam line pressure setpoint greater than or equal to 600 psig. After inclusion of static head corrections, and assuming worst case instrument uncertainties, these setpoints were within the design basis of the plant during operation prior to August 26, 1991.



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|---|---------------------------|-------------------------|----------------------|
| FACILITY NAME TURKEY POINT UNITS 3 & 4 | DOCKET NUMBER 05000250 | LER NUMBER 92-003-00 | PAGE NO. 02 OF 05 |
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I. EVENT DESCRIPTION

NRC Information Notice 91-75, "Static Head Corrections Not Included in Pressure Transmitter Calibration Procedures", issued by the NRC on November 25, 1991, reported that several plants did not include the static head corrections in their pressure transmitter calibration procedures. A review of the Turkey Point Units 3 and 4 calibration procedures revealed that the static head correction was not included in the calculations. The impact resulting from not incorporating the static head correction in the pressure transmitter calibration procedures for Safety Related applications was evaluated for the following Technical Specification setpoints:

- a. High pressurizer pressure reactor trip.
- b. Low pressurizer pressure reactor trip.
- c. Low pressurizer pressure safety injection setpoint.
- d. Low steam generator pressure engineered safety features actuation system initiation.

The static head correction was calculated for the following Safety Related transmitters:

| | | | |
|--------|--------|--------|--------|
| PT-455 | PT-474 | PT-484 | PT-494 |
| PT-456 | PT-475 | PT-485 | PT-495 |
| PT-457 | PT-476 | PT-486 | PT-496 |

The maximum calculated static head correction factors are as follows:

Steam generator pressure (Main steam line pressure) - 4.4 psi
 Pressurizer pressure - 14.5 psi

On March 23, 1992, FPL concluded the evaluation of above setpoints including the static head correction in the existing transmitter calibration procedures. For the worst case pressurizer pressure and steam generator pressure transmitter trip setpoints, the corrected values remain above the current Technical Specification allowable values and therefore are in compliance with the present Technical Specifications and Safety Analysis Limits.

For Technical Specification 3/4.2.5, DNB Parameters, Item b. pressurizer pressure, the potential existed for the minimum operational pressure value to be violated. However, the automatic pressure control system would restore system pressure within the allowed action time. Therefore there is no adverse effect on safety.

For the original Technical Specifications prior to Amendments 137 and 132 (i.e., prior to August 26, 1991) for Units 3 and 4 respectively for the above setpoints, the following Technical Specifications were violated:

- 1. Technical Specification 2.3, Limiting Safety System Settings, Protective Instrumentation, Pressurizer:

Low pressurizer pressure - equal to or greater than 1835 psig.

This reactor protection setpoint, when adjusted for static head correction and assuming the worst case instrument error, may

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have been outside the allowable margin of the Safety Analysis Limit.

2. Technical Specification 3.5, Instrumentation, Table 3.5-4, Engineered Safety Feature Setpoints:

Item 3. Pressurizer Low Pressure Safety Injection Actuation Setpoint \geq 1715 psig.

Item 5. Safety Injection Actuation on a high steam line flow coincident with a low steam line pressure setpoint \geq 600 psig.

After inclusion of static head corrections, and assuming worst case instrument uncertainties, these setpoints were within the design basis of the plant during operation prior to August 26, 1991.

For Technical Specification 3.1.6, Reactor Coolant System, DNB Parameters, Item b. pressurizer pressure, the potential existed for the minimum operational pressure value to be violated. However, the automatic pressure control system would restore system pressure within the allowed action time. Therefore there is no adverse effect on safety.

II. EVENT CAUSE

The cause of the event is attributed to inadequate procedures. The static head corrections had not been incorporated into the calibration procedures for these pressure transmitters.

III. EVENT SAFETY ANALYSIS

FPL reviewed the old Technical Specification sections 2.3 and 3.5 and the calibration procedures in effect prior to the Technical Specification revision which incorporated the new setpoint methodology. FPL determined that, after applying the static head correction factors to the setpoints, there is still adequate margin to the Safety Analysis Limit which existed for the nominal Low Pressurizer Pressure Safety Injection setpoint, and the ESFAS Safety Injection actuation on low steam generator pressure coincident with high steam line flow, when instrument inaccuracies were taken into account. The following details the effect of static head on the each of the setpoints:

1. Technical Specification 3.5, Item 5, Safety Injection Actuation on a High Steam Line Flow Coincident with a Low Steam Generator Pressure

Using the Safety Analysis Limit which was part of the licensing basis prior to August 26, 1991, the static head adjustment of 4.4 psig, and assuming the worst case instrument error:

Technical Specification 3.5, ESFAS Safety Injection Actuation on Low Steam Generator Pressure Coincident with High Steam Line Flow Setpoint \geq 600 psig;
Corrected Trip Setpoint \geq 595.6 psig;
Worst Case Instrument Uncertainties = 44.8 psig
Worst Case Setpoint \geq 550.8 psig
Safety Analysis Limit \geq 432.0 psig

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Sufficient margin to the Safety Analysis Limit is maintained when static head correction is incorporated into the instrument inaccuracies for this setpoint. Therefore, there was no operability concern or safety concern with the operation of the Turkey Point Units 3 and 4 without the pressure transmitter static head correction factors incorporated in the steam generator pressure transmitter procedures.

2. Technical Specification 3.5, Item 3, Pressurizer Low Pressure Safety Injection Actuation Setpoint

Using the Safety Analysis Limit which was part of the licensing basis prior to August 26, 1991, the static head adjustment of 14.5 psig, and assuming the worst case instrument error:

Technical Specification 3.5, Instrumentation, Table 3.5-4, Engineered Safety Feature Setpoints, Item 3. Pressurizer Low Pressure Safety Injection Actuation Setpoint \geq 1715 psig;
Corrected Actuation Setpoint \geq 1700.5 psig;
Worst Case Instrument Uncertainties = 67 psig;
Worst Case Setpoint \geq 1633.5 psig;
Safety Analysis Limit \geq 1600 psig

Sufficient margin to the Safety Analysis Limit is maintained when static head correction is incorporated into the instrument inaccuracies for this setpoint. Therefore, there was no operability concern or safety concern with the operation of the Turkey Point Units 3 and 4 without the pressure transmitter static head correction factors incorporated in the pressurizer pressure transmitter procedures.

The final setpoint involving reactor trip on low pressurizer pressure may have been outside the Safety Analysis Limit during operation prior to August 26, 1991, because of not including the static head in the setpoint calibration. The effect of a static head correction on this setpoint is under evaluation. FPL has not determined if the Safety Analysis was actually exceeded. Therefore, the potential condition was reported to the NRC on April 17, 1992, in accordance with 10 CFR 50.72(b)(ii)(B), "a condition that was outside the design basis of the plant."

An engineering analysis determining if the Safety Analysis limit of a pressurizer pressure of 1790 psig was exceeded will be completed and details of these results will be included in a supplement to this Licensee Event Report by June 1, 1992.

IV. CORRECTIVE ACTIONS

Although inclusion of the static head correction factor for the pressure transmitters is not a violation of the current Turkey Point Units 3 and 4 Technical Specifications (Amendments 137 and 132), applicable plant pressure transmitters locations will be checked and the calibration procedures will be revised (as needed) to include the static head correction factor. This work will be completed by October 6, 1992 for Turkey Point Unit 3, and June 13, 1993 for Turkey Point Unit 4. Additional corrective actions, if required,



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will be identified in the supplemental Licensee Event Report.

V. ADDITIONAL INFORMATION

No similar events involving pressurizer pressure transmitter static head corrections have been reported for Turkey Point.

This event was considered reportable in accordance with 10 CFR 50.73 (a) (2) (i) (B) and 10 CFR 50.73 (a) (2) (ii) (B).

A supplemental Licensee Event Report will be filed upon completion of the Safety Analysis quantifying an acceptable margin for the Low Pressurizer Pressure Reactor Trip setpoint in the context of the Technical Specifications in effect prior to August 26, 1991. An evaluation is in progress of additional potentially affected setpoints and the results of which will be included in the supplemental Licensee Event Report, if applicable.