

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8711170113 DOC. DATE: 87/11/12 NOTARIZED: NO DOCKET #
 FACIL: 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
 AUTH. NAME AUTHOR AFFILIATION
 WAGER, V. Florida Power & Light Co.
 WOODY, C. O. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-025-00: on 871011, containment vent & control room ventilation isolation. Caused by high levels of Rubidium in containment following unit shutdown. Containment activity level returned to normal levels. W/871112 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

| | RECIPIENT ID CODE/NAME | COPIES LTR ENCL | RECIPIENT ID CODE/NAME | COPIES LTR ENCL |
|-----------|------------------------|-----------------|------------------------|-----------------|
| | PD2-2 LA | 1 1 | PD2-2 PD | 1 1 |
| | McDONALD, D | 1 1 | | |
| INTERNAL: | ACRS MICHELSON | 1 1 | ACRS MOELLER | 2 2 |
| | AEOD/DOA | 1 1 | AEOD/DSP/NAS | 1 1 |
| | AEOD/DSP/ROAB | 2 2 | AEOD/DSP/TPAB | 1 1 |
| | ARM/DCTS/DAB | 1 1 | DEDRO | 1 1 |
| | NRR/DEST/ADS | 1 0 | NRR/DEST/CEB | 1 1 |
| | NRR/DEST/ELB | 1 1 | NRR/DEST/ICSB | 1 1 |
| | NRR/DEST/MEB | 1 1 | NRR/DEST/MTB | 1 1 |
| | NRR/DEST/PSB | 1 1 | NRR/DEST/RSB | 1 1 |
| | NRR/DEST/SGB | 1 1 | NRR/DLPQ/HFB | 1 1 |
| | NRR/DLPQ/QAB | 1 1 | NRR/DOEA/EAB | 1 1 |
| | NRR/DREP/RAB | 1 1 | NRR/DREP/RPB | 2 2 |
| | NRR/DRIS/SIB | 1 1 | NRR/PMAS/ILRB | 1 1 |
| | REG FILE 02 | 1 1 | RES DEPY GI | 1 1 |
| | RES TELFORD, J | 1 1 | RES/DE/EIB | 1 1 |
| | RGN2 FILE 01 | 1 1 | | |
| EXTERNAL: | EG&G GROH, M | 5 5 | H ST LOBBY WARD | 1 1 |
| | LPDR | 1 1 | NRC PDR | 1 1 |
| | NSIC HARRIS, J | 1 1 | NSIC MAYS, G | 1 1 |



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LICENSEE EVENT REPORT (LER)

| | | |
|-------------------------------------------------|---------------------------------------------|-----------------------------|
| FACILITY NAME (1) Turkey Point Unit 4 | DOCKET NUMBER (2) 0 5 0 0 0 2 5 1 | PAGE (3) 1 OF 0 3 |
|-------------------------------------------------|---------------------------------------------|-----------------------------|

TITLE (4) **Containment and Control Room Ventilation Isolation Due to High Levels of Rubidium in Containment Following Unit Shutdown**

| 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 | | | | | |
| | | | | | | | | | Turkey Point Unit 3 | | | | | |
| | | | | | | | | | DOCKET NUMBER(S) | | | | | |
| 1 | 0 | 1 | 8 | 7 | 8 | 7 | 0 | 2 | 5 | 0 | 0 | 2 | 5 | 0 |
| | | | | | | | | | N/A | | | 0 | 5 | 0 |

OPERATING MODE (9) **3** THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

| | | | | | |
|----------------------------------|-------------------|------------------|-------------------------------------|----------------------|--------------------------------------------------------------|
| POWER LEVEL (10) 0 0 0 | 20.402(b) | 20.406(c) | <input checked="" type="checkbox"/> | 50.73(a)(2)(iv) | 73.71(b) |
| | 20.406(a)(1)(i) | 50.36(a)(1) | | 50.73(a)(2)(v) | 73.71(c) |
| | 20.406(a)(1)(ii) | 50.36(a)(2) | | 50.73(a)(2)(vii) | OTHER (Specify in Abstract below and in Text, NRC Form 366A) |
| | 20.406(a)(1)(iii) | 50.73(a)(2)(i) | | 50.73(a)(2)(viii)(A) | |
| | 20.406(a)(1)(iv) | 50.73(a)(2)(ii) | | 50.73(a)(2)(vii)(B) | |
| | 20.406(a)(1)(v) | 50.73(a)(2)(iii) | | 50.73(a)(2)(x) | |

LICENSEE CONTACT FOR THIS LER (12)

| | |
|-----------------------------------------|------------------------------|
| NAME | TELEPHONE NUMBER |
| Virgil Wager, Licensing Engineer | 3 0 5 2 4 6 - 6 4 7 6 |

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

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS |
|----------|----------|-----------|----------------|---------------------|-------|--------|-----------|--------------|---------------------|
| B | I | L | R | I | | | | | |
| | | | T 2 6 0 | N | | | | | |

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

| | | | |
|-------------------------------|-------|-----|------|
| EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
| | | | |

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

On October 12, 1987, at 2015, with Unit 4 in Mode 3, Process Radiation Monitor (PRM) R-11, Containment Radioactive Particulate Monitor, actuated containment vent and the control room ventilation isolation. R-12, the Containment Radioactive Gaseous Monitor was verified to be reading normal. A particulate grab sample was taken, and a leak rate calculation was initiated. The particulate grab sample showed a higher than expected radiation level, which was mainly due to Rb-88. The results of the leak rate calculation indicated there was no unexpected RCS leakage. The containment activity level returned to normal levels by approximately 0100, October 13. An investigation of the increased level of Rb-88 radiation identified that the time of the increase coincided with the depressurization of the RCS, and with an increase in iodine activity in the RCS. Based on this, the likely cause of the higher than normal activity was a rapid unit shutdown and subsequent depressurization, due to a hurricane warning. This was exacerbated by a known leak in the fuel cladding. As Dose Equivalent Iodine level is considered to be an indicator of fuel cladding leakage, it will continue to be closely monitored when the unit goes critical, and during subsequent power operation.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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|----------------------------------------------|------------------------------------------|----------------|-------------------|-----------------|----------|----|-----|
| FACILITY NAME (1) Turkey Point Unit 4 | DOCKET NUMBER (2) 0 5 0 0 0 2 5 1 | LER NUMBER (6) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 8 7 | 0 2 5 | 0 0 | 0 2 | OF | 0 3 |

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

EVENT

On October 12, 1987, at 2015, with Unit 4 in Mode 3 (Hot Standby), Process Radiation Monitor (PRM) R-11, Containment Radioactive Particulate Monitor, (EII:IL) increased above its setpoint and actuated the containment vent and the control room ventilation isolation logic. The containment vent isolated and the control room ventilation isolated and switched over to the recirculation mode, per design. No personnel were inside the containment building at this time.

The unit was shut down earlier that day at 1348, as a precautionary measure, because a hurricane warning was in effect for southeast Florida at that time.

Following the actuation, R-12, the Containment Radioactive Gaseous Monitor was verified to be reading normal levels of radiation. A particulate grab sample was taken, and a leak rate calculation was initiated. The particulate grab sample showed a higher than expected radiation level, which was mainly due to Rb-88. The activity level at the time of the R-11 actuation was determined to be 7.67E-07 uc/cc when the analysis results were back-decayed. The expected level under normal operation is approximately 5.0E-08 uc/cc. The results of the leak rate calculation indicated there was no unexpected Reactor Coolant System (RCS) (EII:AB) leakage.

The containment activity level returned to normal levels by approximately 0100, October 13.

CAUSE OF EVENT

An investigation of the increased level of Rubidium-88 radiation identified that the time of the increase in the Rb-88 particulates coincided with the depressurization of the RCS, and with an increase in iodine activity in the RCS. Based on this, an evaluation performed by the Chemistry Department stated that the likely cause of the higher than normal activity was the rapid unit shutdown and subsequent depressurization due to the hurricane warning. This was exacerbated by a known leak in the fuel cladding. The leak in the cladding did not exceed any Technical Specification limits.

ANALYSIS OF EVENT

The containment vent and the control room ventilation isolation functioned per design. There was no release from the containment to the environment, nor were personnel present in the containment at the time of the event. An RCS leak rate calculation was performed and the results showed no unexpected RCS leakage. Based on the above the health and safety of the public were not affected.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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|----------------------------------------------|--------------------------------------------------------|----------------|-------------------|-----------------|----------|----|-------|
| FACILITY NAME (1) Turkey Point Unit 4 | DOCKET NUMBER (2) 0 5 0 0 0 2 5 1 | LER NUMBER (8) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 8 7 | - 0 2 5 | - 0 0 | 0 3 | OF | 0 3 |

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

CORRECTIVE ACTIONS

- 1) R-12 was verified to not be showing increased gaseous activity.
- 2) A particulate grab sample was taken.
- 3) A leak rate calculation was performed, with satisfactory results, indicating that the increased activity was not due to unexpected leaks.
- 4) As Dose Equivalent Iodine level is considered to be an indicator of fuel cladding leakage, it will continue to be closely monitored when the unit goes critical, and during subsequent power operation.

ADDITIONAL DETAILS

Similar Occurrences: None



NOVEMBER 12 1987

L-87-463
10 CFR 50.73


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

Gentlemen:

Re: Turkey Point Unit 4
Docket No. 50-251
Reportable Event: 87-25
Date of Event: October 12, 1987
Containment and Control Room Ventilation Isolation
Due to High Rubidium in Containment Following Unit Shutdown

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,


C. O. Woody
Group Vice President
Nuclear Energy

COW/SDF/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

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