NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

# LICENSEE EVENT REPORT (LER)

| FACILITY NAME (1) | DOCKET NUMBER (2) | PAGE (3) |
|---|---|---|
| Catawba Nuclear Station, Unit 2 | 0 5 0 0 0 4 1 4 | 1 OF 0 3 |

TITLE (4)

Three Containment Isolations Due To Conservative Trip Setpoints

| 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 8 | 1 2 | 8 6 | 8 6 | 0 3 9 | 0 0 | 1 0 | 0 2 | 8 6 | N/A | 0 5 0 0 0 |
| | | | | | | | | | | 0 5 0 0 0 |

| 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) | 0 9 0 | 20.402(b) | 20.405(c) | X 50.73(a)(2)(iv) | 73.71(b) |
| | | 20.405(a)(1)(i) | 50.36(c)(1) | 50.73(a)(2)(v) | 73.71(c) |
| | | 20.405(a)(1)(ii) | 50.36(c)(2) | 50.73(a)(2)(vii) | X 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) | 50.72(b)(2)(ii) |
| | | 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)(x) | |

LICENSEE CONTACT FOR THIS LER (12)

| NAME | TELEPHONE NUMBER |
|---|---|
| | AREA CODE |
| Roger W. Ouellette, Associate Engineer - Licensing | 7 0 4 — 3 7 3 - 7 5 3 0 |

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 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| SUPPLEMENTAL REPORT EXPECTED (14) | | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
|---|---|---|---|---|---|
| YES (If yes, complete EXPECTED SUBMISSION DATE) | X NO | | | | |

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

The Containment Air Release and Addition (VQ) System automatically isolated on three separate occasions, due to containment gaseous radiation levels exceeding the trip setpoint of the Containment Gas Monitor (2EMF-39L). VQ isolated at 1515 hours, 1620 hours, and 1635 hours on August 12, 1986. Containment was sampled prior to the initiation of these releases and it was verified that the 2EMF-39L setpoints were valid. Containment was also sampled following the third VQ isolation and it was verified that containment activity had increased above the trip setpoints. The unit was at 90% power at the time of these incidents.

These incidents are assigned Cause Code X, Other. The Technical Specification which limits the trip setpoint of 2EMF-39L is too conservative. This specification predisposes VQ Engineered Safeguards Feature challenges to occur when containment activity is very low, and releases through VQ are concurrent with any operational activities that disturb containment atmosphere equilibrium.

This incident is reportable pursuant to 10 CFR 50.73, Section (a)(2)(iv) and 10 CFR 50.72, Section (b)(2)(ii).



IE22
1/1



☆ U.S.GPO:1984-0-464-461/18759

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|---|---|---|---|---|---|
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | |
| Catawba Nuclear Station, Unit 2 | 0 5 0 0 0 4 1 4 | 8 6 | — 0 3 9 | — 0 0 | 0 2 OF 0 3 |

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

BACKGROUND

The Process Radiation Monitoring (EMF) System (EIIS:IL) provides early warning of potential radiological hazards. Radiation Monitor 2EMF-39L (low range) monitors the radioactivity of gases inside containment and provides two trip switches that actuate when certain radiation levels above background are reached. Trip 1 setpoint initiates an alarm, while Trip 2 (a higher radiation level) actuates the Containment Evacuation Alarm and an Engineered Safeguard Feature (ESF) signal that will isolate a Containment Air Release and Addition (VQ) System release. The VQ System provides the normal means of controlling containment pressure.

DESCRIPTION OF INCIDENT

On August 12, 1986, at 0842 hours, the VQ System daily grab sampling was performed. At 1125 hours, the results of the grab sampling were completed and the setpoints for 2EMF-39L were determined to be valid. At 1510:16 hours, a VQ release was initiated. At approximately 1515 hours, 2EMF-39L Trip 2 actuated on high radiation resulting in a VQ Containment Isolation. At 1515:46 hours, valve 2VQ-16A, Containment Isolation Valve, closed automatically and at 1515:47 hours, valve 2VQ-2A and 2VQ-3B, Containment Isolation valves, closed automatically. At 1515:48 hours, the last VQ Containment Isolation Valve, 2VQ-15B, closed automatically. The 2EMF-39L Trip 2 signal was reset and at approximately 1620 hours, 2EMF-39L Trip 2 actuated again on high radiation, resulting in a VQ Containment Isolation at 1620:38 hours. The 2EMF-39L Trip 2 signal was reset and at 1622:28 hours, the VQ release was restarted. At approximately 1630 hours, 2EMF-39L Trip 2 actuated for the third time on high radiation resulting in a VQ Containment Isolation at 1630:39 hours.

CONCLUSION

This incident is assigned Cause Code X, Other. Technical Specification 3.3.3.1, Table 3.3-6, limits 2EMF-39L Trip 2 setpoints to twice activity plus background radiation levels. This specification predisposes VQ ESF challenges to occur when containment activity is very low, and releases through VQ are concurrent with any operational activities that disturb containment atmosphere equilibrium. A Technical Specification change request has been initiated to raise the setpoint for 2EMF-39L to the limits required by Technical Specification 3.11.2.1, or approximately 57,000 cpm, when venting or purging radioactivity from containment to the atmosphere. The maximum concentration recorded during these incidents was approximately 260 cpm. There have been three previous incidents in which a containment Gas Monitor tripped due to setpoints being too conservative (see LERs 413/85-54, 413/86-45 and 413/86-48).

Due to miscommunication between personnel, these incidents were not reported to the NRC within the required four hours. An Operator Update will be issued to clarify and reinforce the proper procedures for reporting an ESF actuation.

CORRECTIVE ACTION

(1) A Technical Specification change request was initiated to revise Technical Specification 3.3.3.1, Table 3.3-6.

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|---|---|---|---|---|---|
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | |
| Catawba Nuclear Station, Unit 2 | 0 5 0 0 0 4 1 4 | 8 6 | — 0 3 9 | — 0 0 | 0 3 OF 0 3 |

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

(2) Containment atmosphere was resampled and new 2EMF-39L trip setpoints were obtained.

SAFETY ANALYSIS

Upon each trip of 2EMF-39L, all components responded properly, isolating the VQ release to the Unit Vent. Prior to the release, a grab sample from all containment areas was obtained to assure that radiation levels were within allowable limits. There was no unexpected release of radioactivity to the atmosphere.

The health and safety of the public were not affected by this incident.

DUKE POWER COMPANY
P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

October 2, 1986

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

Subject: Catawba Nuclear Station, Unit 2
Docket No. 50-414

Gentlemen:

Pursuant to 10 CFR 50.73 Section (a) (1) and (d), attached is Licensee Event Report 414/86-39 concerning three Containment air release isolations due to conservative trip setpoints. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

H.B. Tucker/BS

Hal B. Tucker

RWO/50/slb

Attachment

xc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

American Nuclear Insurers
c/o Dottie Sherman, ANI Library
The Exchange, Suite 245
270 Farmington Avenue
Farmington, CT 06032

M&M Nuclear Consultants
1221 Avenue of the Americas
New York, New York 10020

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

NRC Resident Inspector
Catawba Nuclear Station

IE22
1/1