Florida Power
CORPORATION
Crystal River Unit 3
Docket No. 50-302

May 20, 1997
3F0597-16

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Subject: LICENSEE EVENT REPORT (LER) 97-010-00

Dear Sir:

Please find the enclosed Licensee Event Report (LER) 97-010-00 concerning HVAC consideration in the CR-3 Fire Study for manual operation of safe-shutdown equipment in post-fire conditions, which resulted in non-compliance with 10CFR50, Appendix R.

This report is submitted pursuant to 10 CFR 50.73.

Sincerely,

JOHN J. HOLDEN/JAR.

J. J. Holden,
Director
Nuclear Engineering and Projects

JJH/pmp

xc: Regional Administrator, Region II
Senior Resident Inspector
NRR Project Manager

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NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104

EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
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TITLE (4)

HVAC WAS NOT CONSIDERED FOR MANUAL OPERATION OF SAFE-SHUTDOWN EQUIPMENT IN POST-FIRE CONDITIONS RESULTING IN NON-COMPLIANCE OF 10CFR50, APPENDIX R

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 NAME	DOCKET NUMBER
03	27	97	97	-- 010 --	00	05	20	97	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)	000		20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)
			20.2203(a)(1)		20.2203(a)(3)(i)	X	50.73(a)(2)(ii)		50.73(a)(2)(x)
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
			20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Patrick M. Peterson, Sr. Regulatory Specialist	(352) 795-6486, ext. 3433

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 15 single-spaced typewritten lines) (16)

On March 27, 1997 Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 5 (COLD SHUTDOWN). A Precursor Card was generated by FPC questioning the habitability of areas in the plant that contain safe-shutdown equipment in post-fire conditions. On April 21, 1997, after the review of the CR-3 Appendix R Fire Study and the Fire Study supporting documents, FPC discovered that heating, ventilation, and air conditioning (HVAC) consideration in support of post-fire manual actuation of safe-shutdown equipment has not been specifically evaluated and documented in the Fire Study. This condition was evaluated by FPC on April 21, 1997, and was determined to be reportable pursuant to 10CFR50.73(a)(2)(ii)(B). The CR-3 Appendix R Fire Study did not take into account the loss of ventilation for the manual operation of post-fire safe shutdown equipment. FPC will perform calculations and/or revise the procedures necessary to manually operate equipment for post-fire safe shutdown for elevated temperature environment. The action plan identified in Problem Report PR 96-0401 will be annotated to identify the above condition, during the complete review of the post-fire shutdown analysis, as a corrective action step. PR 96-0401 will be utilized to evaluate and track concerns and initiate corrective actions for the CR-3 Appendix R program.

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

EVENT DESCRIPTION

On March 27, 1997 Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 5 (COLD SHUTDOWN). During a review of FPC compliance to 10CFR50 Appendix R, FPC identified a discrepancy in the Fire Study habitability in areas of the plant for manual operation of equipment necessary for safe-shutdown. Safe-shutdown as used in this report is the ability to achieve and maintain the reactor in COLD SHUTDOWN.

A Precursor Card was generated by FPC on March 27, 1997, questioning the habitability of areas in the plant that contain safe-shutdown equipment in post-fire conditions. FPC performed a review of the CR-3 Appendix R Fire Study to investigate the concern.

On April 21, 1997, after the review of the CR-3 Appendix R Fire Study and the Fire Study supporting documents, FPC discovered that heating, ventilation, and air conditioning (HVAC) [AHU] consideration in support of post-fire manual actuation of safe-shutdown equipment has not been specifically evaluated and documented in the Fire Study. This condition was evaluated by FPC on April 21, 1997, and was determined to be reportable pursuant to 10CFR50.73(a)(2)(ii)(B)

EVENT EVALUATION

The safe shutdown analysis, as described in the FPC CR-3 Appendix R Fire Study, Revision 4, assumes equipment necessary for safe-shutdown can be manually operated if remote control is lost. The circuits and components necessary for Control Room and/or Remote Shutdown Panel control of the ventilation system are not identified in the Fire Study as required for safe shutdown and are not protected from the effects of fires. Therefore the ventilation system must be assumed to be unavailable after a fire. The assumption in the CR-3 Appendix R Fire Study is that the areas that have equipment necessary for safe-shutdown are habitable for manual operation of equipment to achieve post-fire COLD SHUTDOWN.

The inability to manually operate equipment required for safe-shutdown in Appendix R post-fire scenarios may lead to exceeding the time requirement to achieve COLD SHUTDOWN.

Operating Procedures, such as OP-880 and AP-990, do not include provisions for post-fire entry into an elevated temperature environment. Appendix R, Section III.L states that procedures shall be in effect to implement the post-fire safe shutdown capability. Compliance to Appendix R for post-fire safe shutdown can not be demonstrated because the ability to perform post-fire manual actions in areas with elevated temperatures is not documented.

CAUSE

The preparers of the Fire Study did not consider loss of ventilation for the manual operation of post-fire safe shutdown equipment during the preparation of the Fire Study. FPC was provided an opportunity to review the Fire Study prior to issuance, however, FPC did not perform a formal verification of the Fire Study. CR-3 was constructed prior to implantation of 10CFR 50, Appendix R. The Fire Study was generated after Appendix R became effective. FPC does not have a requirement to prepare the Fire Study under a Quality Assurance Program, which requires a formal verification.

IMMEDIATE CORRECTIVE ACTIONS

CR-3 is currently in COLD SHUTDOWN, therefore, no immediate corrective actions were necessary.

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

CORRECTIVE ACTIONS

FPC will perform an evaluation of those areas with equipment required for post-fire safe-shutdown and/or revise the procedures necessary to manually operate equipment for post-fire safe shutdown for elevated temperature environment.

ACTIONS TO PREVENT RECURRENCE

The action plan identified in Problem Report PR 96-0401 will be annotated to identify the above condition, during the complete review of the post-fire shutdown analysis, as a corrective action step. PR 96-0401 will be utilized to evaluate and track concerns and initiate corrective actions for the CR-3 Appendix R program. This action is identified as a restart issue for CR-3 (D-11).

SIMILAR EVENTS

Other LERs have been written regarding Appendix R, however, this is the first report concerning the manual operation of safe-shutdown equipment in post-fire conditions.