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

September 18, 1995
3F0995-05

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

Subject: Licensee Event Report (LER) 95-014-00

Dear Sir:

Please find the enclosed Licensee Event Report (LER) 95-014-00. This report is submitted by Florida Power Corporation in accordance with 10 CFR 50.73.

Sincerely,

Ron Davis FOR B.J. HICKLE

B. J. Hickle, Director
Nuclear Plant Operations

JAF:ff
Attachment

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

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NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HOURS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (MNBB 7714), 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)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
CRYSTAL RIVER UNIT 3 (CR-3)	0 5 0 0 0 3 0 2	1 OF 0 6

TITLE (4)

Technical Support Center Air Flow Deviates From Acceptable Flow Resulting In Operation Outside The Design Basis

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)
									N/A	0 5 0 0 0
0 8	1 8	9 5	9 5	--- 0 1 4 ---	0 0	0 9	1 8	9 5	N/A	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 5	20.402(b)	20.405(c)	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)	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)	
		20.405(a)(1)(iv)	X 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
J. A. Frijouf, Nuclear Regulatory Specialist	9 0 4 5 6 3 - 4 7 5 4

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	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)

On August 18, 1995, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE ONE (POWER OPERATION), operating at 95% reactor power and generating 825 megawatts. During the performance of Work Request 321590, FPC determined that ventilation air flow within the Technical Support Center (TSC) when operating in the Emergency Recirculation Mode (Emergency) was outside the accepted air flow ranges and comprised operation outside the design basis of the plant.

During a review of the Enhanced Design Basis Document for the TSC air handling system, FPC personnel determined that the emergency filter fan AHF-62 has a maximum design flow rate of 3000 cubic feet per minute (cfm). The 3000 cfm flow rate is designed to provide optimum flow through the filters. The "as-found" flow in the emergency configuration allowed about 4600 cfm through AHF-62. Therefore, FPC was outside the design basis of the TSC ventilation system. The primary cause of this event was procedural error involving inadequate document content. Corrective actions include a new procedure, training, and revision of applicable documents. On August 19, 1995, the event was reported to the Nuclear Regulatory Commission (NRC) as a 1-hour Non-Emergency Report.

APPROVED OMB NO. 3150-0104

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

EVENT DESCRIPTION:

On August 18, 1995, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE ONE (POWER OPERATION), operating at 95% reactor power and generating 825 megawatts. During the performance of Work Request 321590, FPC determined that ventilation air flow within the Technical Support Center (TSC) when operating in the Emergency Recirculation Mode (Emergency) was outside the accepted air flow ranges. Emergency flow mode is utilized during plant accidents involving radioactive releases.

At 2340, on the same day, during a subsequent review of the Enhanced Design Basis Document (EDBD) for the TSC air handling system, FPC personnel determined that the emergency filter fan AHF-62 [UF,FAN](AHF-62) has a maximum design flow rate of 3000 cubic feet per minute (cfm). The 3000 cfm flow rate is designed to provide optimum flow through the filters. The "as-found" flow in the emergency configuration allowed about 4600 cfm through AHF-62. Therefore, FPC was operating outside the design basis of the TSC ventilation system. An initial investigation indicates that the dampers [UF,DMP] may have been in the wrong position since the last performance of the flow balancing procedure in July, 1994.

Subsequently, at 0004 on August 19, 1995, the event was reported to the Nuclear Regulatory Commission (NRC) as a 1-hour Non-Emergency Report per the requirements of 10 CFR 50.72(b)(1)(ii)(B). The event was issued the NRC Event number 29218. This report is submitted in accordance with 10 CFR 50.73(a)(2)(ii)(B).

EVENT EVALUATION

The TSC air handling system fulfills two basic functional requirements: 1) it provides filtered, conditioned air to the TSC; and 2) it controls/limits the leakage of radioactivity into the building in the event of an accident resulting in a radioactive release. The TSC is not addressed in Improved Technical Specifications (ITS), however, NRC NUREG-0737, Supplement 1, Item III.A.1.2, places requirements on the TSC air handling system.

The TSC air handling system, operating in the emergency mode, is designed to maintain the occupied spaces habitable and provide equipment cooling in the event of a plant accident. The TSC air handling system accomplishes the habitability portion of this requirement by maintaining the TSC at a slight positive pressure, thus preventing unfiltered leakage into the building. Additionally, the relative humidity in the TSC must be maintained at less than 70% to ensure that filtering requirements are accomplished.

Damper AHD-119 [UF,DMP](AHD-119) limits makeup air to the filter banks when in the emergency mode. Along with damper AHD-118 [UF,DMP](AHD-118), AHD-119 limits total

flow to the charcoal filter bank to 3000 cfm to optimize performance of the filter bank and to prevent overexposure of personnel in the TSC.

The consequence of an accident rendering the TSC uninhabitable has been addressed by emergency procedures. In the event that the TSC becomes uninhabitable, the TSC emergency staff is directed to relocate to a room located within the Control Complex [NA,] Habitability Envelope (HE), adjacent to the control room.

A challenge to the habitability of the TSC would occur during a substantial radioactive release. The CR-3 Probabilistic Safety Assessment (PSA) states that the risk of a core damage event resulting in an early containment failure is 3.0E-7 per year. This value closely approaches both the Individual Plant Evaluation (IPE) reporting cutoff of 1.0E-7 per year and the "non-risk-significant" region of the guidance given in the draft Nuclear Energy Institute (NEI) PSA Applications Guide.

Based on the low probability of occurrence of a postulated event and the availability of the alternate TSC location, FPC has concluded that this event did not create a safety concern, and the health and safety of the general public was not compromised.

CAUSE

The primary cause of this event was procedural error involving inadequate document content and discrepancies between documents. A review was conducted by FPC personnel relative to the TSC air handling system. This review determined that during a flow balancing evolution in 1994, some confusion existed during the performance of the work. A recommendation contained in the work package completion documentation was made which suggested the inclusion of more precise instructions in future work packages. The review further determined that the current work package did not contain specific information (e.g., method to take meaningful flow data, drawing inconsistencies, test equipment to be used, etc.) needed to properly perform the flow balance. The work package acceptance criteria did not comply with the requirements of the EDBD. Additionally, some design documents, including the EDBD and various electrical and mechanical drawings, were vague, incorrect or contradicted each other.

IMMEDIATE CORRECTIVE ACTION

1. Upon discovery of this condition, a Problem Report (PR-95-0154) was issued which documented the deficiency.

2. Work was initiated to properly balance TSC emergency air flow.

ADDITIONAL CORRECTIVE ACTION

1. A Management Review Panel (MRP) was convened to address the TSC ventilation issue. The purpose of the MRP is to review the root cause and corrective actions associated with an event. Additionally, the MRP utilizes lessons learned from the current event in a broader application by relating them to other plant systems not directly related to the current event.

2. A new procedure will be written and issued which will enhance the directions for performing flow balances. This procedure will be issued by November 15, 1995.

3. Reperformance of the TSC flow balance will be accomplished within 30 days from issuance of the new procedure.

4. A comprehensive corrective action plan addressing the TSC ventilation system in both the emergency and normal modes has been presented to the MRP. Key corrective actions addressed in this plan will be incorporated into the Problem Report Corrective Action System.

ACTION TO PREVENT RECURRENCE

1. In depth training of the HVAC technicians will be conducted. This training will relate to the emergency mode of operation of the TSC system. The operation of dampers and controllers in the emergency mode, as well as FPC commitments to the NRC will be addressed in order to impress upon the technicians the importance of this system. This training will be completed by June 30, 1996.

2. The EDBD, and associated drawings and documents will be revised to be consistent with the system design. This action will be completed by January 16, 1996.

PREVIOUS SIMILAR EVENTS

There have been no previous reportable events involving TSC flow balancing or deficiencies.

ATTACHMENT

ATTACHMENT 1 - Abbreviations, Acronyms and Definitions

ATTACHMENT 1 - ABBREVIATIONS, ACRONYMS AND DEFINITIONS

AHD-118	Inlet Damper
AHD-119	Inlet Damper (filter bank)
AHF-62	Fan
CFM	Cubic Feet per Minute
CR-3	Crystal River Unit 3
EDBD	Enhanced Design Basis Document
EIIS	Energy Industry Identification System
FPC	Florida Power Corporation
HE	Control Complex Habitability Envelope
HVAC	Heating, Ventilating Air Conditioning
IPE	Individual Plant Evaluation
ITS	Improved Technical Specifications
MODE ONE	Power Operation
MRP	Management Review Panel
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NUREG-0737	Clarification of TMI Action Plan Requirements
PSA	Probabilistic Safety Assessment
TSC	Technical Support Center

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

NOTES: ITS defined terms appear capitalized in LER text (e.g. MODE ONE)

Defined terms/acronyms/abbreviations appear in parenthesis when first used (e.g. Reactor Building (RB)).

EIIS codes appear in square brackets (e.g. Makeup Tank [CB,TK])