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)
CRYSTAL RIVER UNIT 3	0 5 0 0 0 3 0 2	1 OF 0 4

TITLE (4)

IMPROPER INSTALLATION OF CONCRETE ANCHORS FOR CONTROL COMPLEX HVAC SUPPORTS

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 5	0 1	8 5	8 5	— 0 0 4	— 0 4	0 2	1 3	8 6	N/A	0 5 0 0 0
									N/A	0 5 0 0 0

OPERATING MODE (9)	6	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)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	X 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)	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
W. K. Bandhauer, Nuclear Safety Supervisor	AREA CODE 9 0 4 7 9 5 - 6 4 8 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	V I S	P T	K 2 0 4	N							

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 April 25, 1985, while in a refueling outage, it was determined that at least one heating and ventilation ductwork support was improperly installed. Subsequent investigation completed May 1, 1985, revealed that approximately 55% of the supports in the safety related portion of the Control Complex HVAC System had "deceit bolts" installed.

The Architect/Engineer has conducted a re-evaluation of the Control Complex HVAC System for seismic qualification. Repairs were completed for all identified deficiencies. The system was restored to its design capability.

This revised report is submitted to document the completion of the Architect/Engineer's analysis and FPC's acceptance of the seismic design analysis of 34 deceit anchors and deficient anchors that were found during the inspection of the HVAC supports located in systems outside the control complex. Ten supports require modification to meet plant design requirements but no conditions exist which would prevent safe continued operation of CR-3.

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

EVENT DESCRIPTION

On April 25, 1985, Crystal River Unit 3 was in a refueling outage with the reactor core completely unloaded. At 1800 it was discovered that some of the supports in the Control Complex Heating and Ventilation System (VI) were improperly installed. Subsequent investigation completed May 1, 1985 revealed that approximately 55% of the supports in the safety-related portion of the system had "deceit bolts" installed. A "deceit bolt" is defined as follows:

1. Bolt head is cut from bolt stem and bolt head is welded onto base plate to make it appear to be a complete and properly installed bolt.

2. Bolt does not engage expansion anchor for one bolt diameter (normally 1/2 inch).

3. Bolt hole in base plate is greater than 5/8 inch in diameter and no washer is present.

4. Bolt hole in base plate is greater than 3/4 inch in diameter and washer is installed.

This placed the system outside of the requirements of Technical Specification 3.7.7.1. The discrepancy was discovered by Quality Control Inspectors during the performance of required inspections in support of modification work in progress this outage.

The originally identified problem is that some of the bolts in a seismic anchor for the ductwork were either not long enough to properly secure the support to the wall or the bolts were cutoff and the heads were tack welded to the support frame. This gave the appearance that they were properly installed bolts when they were not. Subsequent inspection by an independent consulting firm determined that approximately 90 of the 160 supports had some bolting deficiency.

SAFETY CONSIDERATIONS

A determination of the impact on the seismic qualification of the system has been made by the Architect/Engineer (A/E) and concludes that, with the identified deficiencies corrected, the Control Complex HVAC System is fully capable of performing under all design seismic loading conditions.

CORRECTIVE ACTIONS

A thorough inspection of every support in the safety related portion of the system has been conducted and each support has been individually certified as to whether it is built as designed or not. All identified discrepancies have been repaired and were corrected before a mode change was made into the applicable mode of the referenced Technical Specification.

In response to the concerns of a Region II NRC Inspector, the following information is provided:

The proposed "sample" inspection of the remainder of the HVAC system supports in the auxiliary building and the reactor building resulted in a 100 percent inspection of all supports originally included in the support inventory.

The HVAC systems included in the sampling program were:

Reactor Building Recirculation	AH-XA
Reactor Building Purge	AH-XC
Decay Heat Pump Cooling	AH-XF
Spent Fuel Coolant Pump Cooling	AH-XG
Emergency Diesel Generator Ventilation	AH-XL
Auxiliary & Fuel Handling Building Exhaust	AH-XJ

The inspection results were as follows:

Anchors inspected	594
Oversized/elongated holes in base-plate (deceit bolt)	14
Deficient anchors (other)	20
Inaccessible to inspection	17
Acceptable	543

Review of the inspection results indicates that the 'deficient' anchors found were primarily the result of sloppy workmanship rather than an attempt to falsify and deceive construction efforts, as was apparently the case with the welded bolt heads in the control complex.

In addition to the inspection performed, review of the original construction records has determined that this ventilation contractor was responsible for his own quality control inspection. No other QC organization was involved in the installation of the HVAC supports, and the ventilation contractor's QC organization was not involved in the inspection or acceptance of any other systems. Therefore, there is no reason to believe this deficiency extends outside the scope of work performed by this contractor.

FPC has reviewed and accepted the Architect/Engineer's analysis of the seismic design of the 34 deceit anchors and deficient anchors found in the 100% inspection of the HVAC supports located in safety and non-safety Technical Specification-related systems at CR-3.

The results of the analysis indicate that 10 existing supports have some deficiencies that require field modification in order to meet the original design conditions. Although these supports do not presently meet the minimum plant design requirements, an operability analysis performed by the Architect/Engineer has determined that no conditions exist which would impair the continued safe operation of CR-3.

Development and implementation of the necessary modifications is proceeding in a timely manner. A Modification Approval Record (MAR) to correct these deficiencies will be issued by June 1, 1986.

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

PREVIOUS SIMILAR EVENTS

On October 17, 1983, three deficient non-safety related supports were discovered in another section of the control complex ventilation system. Two supports were missing bolts and one support had a bolt head tack welded to the base plate. The missing and defective bolts were later correctly installed. No further investigation was documented as the "deceit" bolt was not considered generic.

Florida Power
CORPORATION

February 13, 1986
3F0286-07

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

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Licensee Event Report No. 85-004-04

Dear Sir:

Enclosed is Licensee Event Report (LER) No. 85-004-04 which is submitted in accordance with 10 CFR 50.73.

Should there be any questions, please contact this office.

Sincerely,

G. R. Westafer

G. R. Westafer
Manager, Nuclear Operations
Licensing and Fuel Management

AEF/feb

Enclosure

xc: Dr. J. Nelson Grace
Regional Administrator, Region II
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, GA 30323

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