

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9212070177 DOC. DATE: 92/12/02 NOTARIZED: NO DOCKET #  
 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251  
 AUTH. NAME AUTHOR AFFILIATION  
 PLUNKETT, T.F. Florida Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 Document Control Branch (Document Control Desk)

SUBJECT: Forwards response to NRC recommendation, transmitted via  
 921014 ltr re Unit 2 fossil chimney. Tiltmeter installed at  
 chimney wall approx 394 ft above ground. Vertical cracking  
 noted during 921012 insp of chimney.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3  
 TITLE: OR Submittal: General Distribution

NOTES: NRR RAGHAVAN, L 05000250  
 NRR RAGHAVAN, L 05000251

	RECIPIENT		COPIES		
	ID CODE/NAME		LTTR	ENCL	
	PD2-2 LA		1	1	
	AULUCK, R		2	2	
INTERNAL:	NRR/DET/ESGB		1	1	
	NRR/DST/SELB 7E		1	1	
	NRR/DST/SRXB 8E		1	1	
	OC/LEMB		1	0	
	REG FILE 01		1	1	
EXTERNAL:	NRC PDR		1	1	
	NSIC		1	1	
NOTES:			1	1	

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK.  
 ROOM P1-37 (EXT. 504-2065) TO ELIMINATE YOUR NAME FROM DISTRIBUTION  
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 17 ENCL 15

*[Handwritten signature]*

9

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18



DEC 02 1992

L-92-327

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

Gentlemen:

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Turkey Point Fossil Unit 2 Chimney

By letter dated October 14, 1992, the staff provided recommendations pertaining to Turkey Point Fossil Unit 2 chimney. In response to the staff's recommendations attached is a summary of the actions implemented.

Should there be any questions about this submittal, please contact us.

Very truly yours,

*TF Plunkett by AS Peace*

T. F. Plunkett  
Vice President  
Turkey Point Nuclear

TFP/RJT/rt

Attachment

cc: S. D. Ebnetter, Regional Administrator, Region II, USNRC  
R. C. Butcher, Senior Resident Inspector, USNRC, Turkey Point

070008

9212070177 921202  
PDR ADDCK 05000250  
P PDR

*Asol*  
*11*

Handwritten notes in the top right corner, including the number "3" and some illegible scribbles.

Handwritten text in the center of the page, possibly a title or a line of a letter, which is mostly illegible due to fading.

Handwritten text at the bottom right of the page, possibly a signature or a date.

Handwritten text at the bottom left of the page, possibly a date or a reference number.

**TURKEY POINT UNITS 3 & 4  
RESPONSE TO NRC RECOMMENDATIONS  
RELATIVE TO UNIT 2 CHIMNEY**

In the summary of the September 22, 1992 meeting held at Turkey Point between Florida Power and Light (FPL) and the NRC on the subject of the Unit 2 chimney evaluation, the NRC recommended some follow-up inspections and monitoring. The NRC recommendations and FPL's responses are provided below.

NRC Recommendation (a):

Develop a surveillance plan for a periodic inspection/survey of the Unit 2 stack to monitor any future stack inclination or stiffness degradation as can be observed by natural frequency changes. This effort can be terminated upon completion of the reconstruction of the Unit 2 stack.

Response

The measurement of natural frequencies is discussed under the response to Recommendation (b). In order to satisfy the request for monitoring of stack inclination, a tiltmeter has been installed on the Unit 2 chimney wall approximately 394 ft. above ground. The tiltmeter chosen is a highly accurate device which uses electrolytic tilt transducers to reference biaxial angular movement to the unchanging vertical gravity vector.

Benchmark tiltmeter readings were taken on November 5, 1992. Additional readings will be taken on a monthly basis and compared to the benchmark readings. Any deviations from the benchmark readings, which cannot be attributed to temperature or wind effects will be investigated further.

This surveillance method will be discontinued once the Unit 2 chimney reinforcing effort is complete.

NRC Recommendation (b):

Verify natural frequencies from measurement of free vibration. This effort can be terminated upon commencement of the reconstruction of the Unit 2 stack.

Response

Dynamic characteristics tests were performed on the Unit 2 chimney on October 13, 1992 and November 16, 1992, using servo accelerometers located at the 390 ft. and 260 ft. chimney elevations. Both tests yielded identical fundamental mode frequencies. The frequencies recorded were 0.61 Hz for the first mode and 1.6 Hz for the second mode. These frequencies correspond well with the bounding values used in the analysis of the Unit 2 chimney in its current condition. The exact agreement between the frequencies recorded in the first test and those recorded in the second test indicate that no structural degradation of the chimney is taking place.

NRC Recommendation (c):

Verify orientation, distribution and thickness of cracks due to thermal stress at essentially identical stacks at other facilities operated by the licensee.

Response

The FPL Cape Canaveral Units 1 & 2 chimneys are essentially identical to the Turkey Point Unit 2 chimney. These chimneys were inspected on October 12, 1992. The inspection identified vertical cracking on both the interior and exterior surfaces, which is similar in orientation and distribution to that identified on the Turkey Point Unit 2 chimney. The crack widths are greater at Turkey Point, and no horizontal cracking was identified at Cape Canaveral. These differences are attributed to the fact that the Cape Canaveral site has not been subjected to hurricane wind loads near the magnitude experienced at Turkey Point during Hurricane Andrew. Accordingly, less severe crack conditions are expected.

The inspection results are consistent with the assumptions used in the structural evaluations conducted for the Turkey Point Unit 2 chimney.



Handwritten notes in the top right corner, including the word "Jury" and several illegible scribbles.

Small handwritten mark or character.

Small handwritten mark or character.

Small handwritten mark or character at the bottom of the page.