

INTERIM DEFICIENCY REPORT

DAMPER ACTUATORS

Name of Station:	St. Lucie Plant - Unit 2
Owner:	Florida Power & Light Company
Architect/Engineer:	Ebasco Services, Incorporated
Date NRC Notified:	February 21, 1980
Interim Report Filed:	March 21, 1980

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I. SUMMARY

American Warming & Ventilating, Inc. had notified the Architect/Engineer that a certain spring in some hydramotor actuators for dampers were manufactured from an incorrect material. American Warming had also notified the NRC Office of Inspection and Enforcement per 10 CFR 21.

In addition to the above reported deviation, American Warming & Ventilating also notified the Architect/Engineer that selection nomographs for selecting or sizing certain hydramotor actuators could be interpreted incorrectly. Again, American Warming notified the NRC Inspection and Enforcement Office per 10 CFR 21.

Per the requirements of 10 CFR 50.55(e), the events are deemed potentially reportable and by telephone FPL notified the NRC on February 21, 1980 of such. This interim report is being submitted to advise the NRC of the status of these deficiencies.

II. DESCRIPTION

ITT General Controls of Glendale, California, a subcontractor to supply actuators to American Warming & Ventilating Inc., notified American Warming of the existence of a material deviation in a certain spring in some hydramotor actuators. One spring, ITT Part No. 17443A, used in some NH91, 92, 95, 96 and 98 milliampere hydramotor actuators has been discovered to be manufactured from an incorrect material. It does not possess the designed strength and will, upon actuation of a greater than three inch stroke, take a permanent set. This results in a decreased force output of approximately 160 lbs. at all compressed positions. When these aforementioned actuators are subjected to an electrical input control signal of zero, the actuator output does not develop the published force when the output shaft is moved to its full position (i.e., fully closed or fully opened).

The dampers (D) impacted by the above spring material deviation are as follows:

<u>Shipped to Site</u>		<u>Not Shipped</u>		
D-14	D-30	D-8A	D-15	D-36
D-16	D-31	D-8B	D-33	
D-29	D-32	D-9A	D-34	
		D-9B	D-35	

All the above dampers are safety related.

## II. DESCRIPTION (Cont'd)

On February 5, 1980, American Warming received a letter from ITT General Controls stating that American Warming purchased ITT General Controls' AH90 series or NH90 series hydramotor actuators which may have been selected or sized by using the "Selection Nomographs" on ITT's application form \$608.1067.2. ITT General Controls advised American Warming that the subject nomographs could be interpreted incorrectly. The forces that are derived from the chart represent the actual spring or hydraulic forces only, i.e., the effects of friction or residual hydraulic forces are not included. These actuators could have about 100 lbs. of friction and an additional 40 lbs. of residual hydraulic pressure. This means that there was a possibility that the ITT General Controls' AH90 series actuators supplied with American Warming dampers would not meet the specified safety factors with respect to thrust delivered to the damper assembly.

The dampers (D) and louvers (L) impacted by the above nomograph problem are as follows:

<u>Shipped to Site</u>				<u>Not Shipped</u>		
D-7A	D-16	D-21	D-29	D-1	D-6A	D-11A
D-7B	D-17A	D-22	D-30	D-2	D-6B	D-11B
D-12A	D-17B	D-23	D-31	D-3	D-8A	D-15
D-12B	D-18	D-24	D-32	D-4	D-8B	D-33
D-13	D-19	D-27	D-39	D-5A	D-9A	D-34
D-14	D-20	D-28	D-40	D-5B	D-9B	D-35
			2L-8			D-36
			2L-11			

All of the above dampers and louvers are safety related.

## III. CORRECTIVE ACTION

ITT General Controls has advised American Warming that the spring force output data is incomplete and that further tests are being conducted.

In addition, ITT General Controls has committed to supplying American Warming accurate data on the thrust delivered by actuators affected by use of the nomograph. American Warming will then be in a position to identify those damper/actuator assemblies which may be out of specification and to develop corrective procedures where necessary.

To date there has not been an established completion schedule for either ITT General Controls' actuator problem.

### III. CORRECTIVE ACTION (Cont'd)

American Warming will notify Ebasco Services of any resolutions reached. Until such time, the affected dampers already at the site are being placed on hold and no other affected dampers in the vendor's shop will be shipped.

### IV. SAFETY IMPLICATIONS

Until American Warming & Ventilating, Inc. determines the extent to which the spring material deviation or actuators selected or sized using nomograph on ITT General Controls application form #608.1067.2 deviated from specification requirements, these deficiencies are deemed potentially reportable. If either of the deficiencies result in improper performance of the safety related dampers, and were it to have remained uncorrected, it could have affected adversely the safety of operations of the nuclear plant some time throughout the expected lifetime of the plant.

### V. CONCLUSIONS

A final report is anticipated by June 30, 1980. The final report will provide the results of the American Warming & Ventilating, Inc. review and the necessary corrective actions to be taken.