



Duquesne Light

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July 21, 1983

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

ATTENTION: Dr. Thomas E. Murley
Administrator

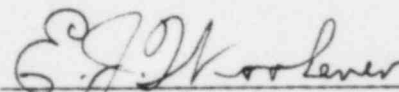
SUBJECT: Beaver Valley Power Station - Unit No. 2
Docket No. 50-412
Potentially Defective Robertshaw Thermostatic Control Valves
Significant Deficiency Report No. 82-03

Gentlemen:

Pursuant to the requirements of 10CFR50.55(e), the "Final Report on Potentially Defective Robertshaw Thermostatic Control Valves" is attached for your review. If there are any questions concerning this report, please contact the Beaver Valley Unit No. 2 Project Office.

DUQUESNE LIGHT COMPANY

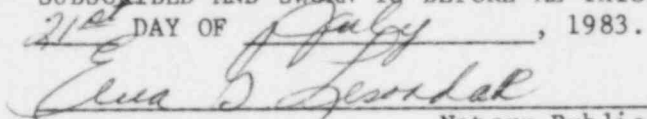
By


E. J. Woolever
Vice President

JMM/wjs
Attachment

cc: Mr. R. DeYoung, Director
Office of Inspection and Enforcement (3) (w/a)
NRC Document Control Desk (w/a)
Mr. G. Walton, NRC Resident Inspector (w/a)
Ms. L. Lazo, Project Manager (w/a)
INPO Records Center (w/a)

SUBSCRIBED AND SWORN TO BEFORE ME THIS
21st DAY OF July, 1983.


Notary Public

ELVA G. LESONDAK, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

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COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF ALLEGHENY)

On this 21st day of July, 1983, before me,
a Notary Public in and for said Commonwealth and County, personally
appeared E. J. Woolever, who being duly sworn, deposed and said that (1)
he is Vice President of Duquesne Light, (2) he is duly authorized to exe-
cute and file the foregoing Submittal on behalf of said Company, and (3)
the statements set forth in the Submittal are true and correct to the best
of his knowledge.


Notary Public

ELVA G. LESONDAK, NOTARY PUBLIC
ROBINSON TOWNSHIP, ALLEGHENY COUNTY
MY COMMISSION EXPIRES OCTOBER 20, 1986

BEAVER VALLEY POWER STATION - UNIT NO. 2
DUQUESNE LIGHT COMPANY

Final Report on Potential Deficiency of Emergency
Diesel Generator Thermostatic Control Valve
"Lower Overrun Assembly"

1. SUMMARY

Colt Industries has reported that the diesel engines of the BVPS-2 emergency diesel generator sets are equipped with potentially defective thermostatic control valves manufactured by Robertshaw Controls Company. Malfunction of these valves could cause extreme overcooling with attendant risk of engine damage.

2. IMMEDIATE ACTION TAKEN

Upon notification of the problem by Colt Industries, Stone & Webster Engineering Corporation issued a report of a problem and initiated an inspection of the BVPS-2 emergency diesel generator sets which confirmed that the diesels are equipped with the potentially defective valves. On July 26, 1982, Duquesne Light Company notified the Region I office of the problem by telephone. Colt Industries also filed a 10CFR21 report with the director of the NRC's Region III Office of Inspection and Enforcement.

3. DESCRIPTION OF DEFICIENCY

The diesel engine of each BVPS-2 emergency diesel generator is equipped with a Robertshaw Model I-1285-S25 thermostatic control valve. The 5-inch, 3-way control valve is located in the engine's intercooler water system. The valve's design incorporates a lower overrun assembly which absorbs movement generated by thermal assemblies under certain conditions. The overrun assembly consists of a spring restrained between two end pieces whose length and "breakdown" is set by an axial bolt and nut. Under normal conditions, this assembly acts as a rigid member. Should the nut not be firmly affixed in place and "back off," the longer length of the overrun assembly results in a valve stroke which is not generated by the thermal assembly. This additional stroke makes the thermal assembly control at a lower temperature, thus overcooling the system. In order to prevent the nut from backing off and allowing the valve to go into the full cooling position, Robertshaw has employed a design which stakes the retaining nut in place and a design in which the nut is soldered to the axial bolt. Neither of these designs has proved to be satisfactory in actual operating conditions.

4. ANALYSIS OF SAFETY IMPLICATION

The emergency diesel generators are required during design basis events to supply electric power to the safety-related components. The potential malfunction of the thermostatic control valve and subsequent extreme overcooling of the diesel engine could cause the diesel generator to be unavailable or fail while carrying emergency loads, and, therefore, could adversely affect the safety of operations.

5. CORRECTIVE ACTION TO REMEDY DEFICIENCIES

Robertshaw Controls Company, working in conjunction with Colt Industries, has presented a procedure for correcting the deficiency by utilizing cotter pins to keep the nut in position on the overrun assembly.

6. FINAL REPORT

The corrective action is completed. The modification, utilizing cotter pins to keep the nut in position on the overrun assembly, has been completed.