



**ENERGY SERVICES GROUP**

July 19, 1990

Director of Nuclear Reactor Regulations  
U.S. Nuclear Regulatory Commission  
Mail Station P1-137  
Washington, DC 20555

**REPORT #154**

Dear Sir,

In accordance with the requirements of Title 10, Chapter 1, Code of Federal Regulations, Part 21, Energy Services Group, a Division of COOPER INDUSTRIES, hereby notifies the Commission of a potential defect in a component of a DSR or DSRV Standby Diesel Generator System. There exists a potential problem with the Starting Air Admission Valve, a safety related component in the starting air system.

COOPER INDUSTRIES supplied DSR and DSRV engines and/or spare parts with this potential defect to the following sites:

UTILITY	SITE	SERIAL NO.	MODEL
LILCO	Shoreham	74010-12	DSR-48
SERI	Grand Gulf	74033-36	DSRV-16-4
GULF STATES	River Bend	74039-40	DSR-48
CP&L	Shearon Harris	74046-49	DSRV-16-4
DUKE	Catawba	75017-20	DSRV-16-4
SO CAL ED	San Onofre	75041-42	DSRV-20-4
CEI	Perry	75051-54	DSRV-16-4
TVA	Bellefonte	75080-83	DSRV-16-4
WPPS	WPPSS I	77084-85	DSRV-16-4
TUSI	Comanche Peak	76001-04	DSRV-16-4
GEORGIA PR	Vogtle	76021-24	DSRV-16-4
CONSUMERS PR	Midland	77001-04	DSRV-12-4
TVA	Hartsville	77024-35	DSRV-16-4
SMUD	Rancho Seco	81015-16	DSR-48

ENTERPRISE ENGINE SERVICES

14490 Catalina Street  
P.O. Box 1837  
San Leandro, CA 94577  
(415) 614-7400 - Fax: (415) 614-7409

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Georgia Power at Vogtle has recently reported four (4) intermittent failures to start the 2B diesel generator. In all but the last failure to start, subsequent start attempts were successful.

It has been determined that the cause of the failure to start was the air start piston sticking in the air start valve cap. Sticking in the piston cap can cause the air valve to stick in either the closed or open position.

A valve stuck in the closed position will result in a "dead" cylinder. This will have a slight negative impact on engine start time, but the increase in starting time will not be significant and in almost all cases not noticeable. Multiple closed valves on an engine can result in a very slow engine start or failure to start.

A valve stuck in the open position would most likely result in a very slow engine start or failure to start. If this were to occur on an operating engine, the engine would lose the output of the affected cylinder until normal vibrations freed the piston sufficiently for the valve to close. This could impair the engines ability to carry rated load if the valve did not reseat.

Our investigation continues to establish a course of corrective action. Examination of components suggests a combination of root cause conditions, i.e., a close tolerance design fit between the piston and cap and the affect of coefficients of expansion for different materials of construction in these components. This condition may be exacerbated by possible bore distortion occurring when the cap is tightened to the valve body and cylinder head.

Sticking valves may be identified by first increasing the engine temperatures to the maximum operating temperature by running it at full load for approximately a one-hour period. The valve is then manually cycled by applying a 60 psi pilot signal to the pilot input at the subcover. The valve should audibly open upon application of the pilot signal. It should audibly snap closed when the pilot signal is removed.

Our final recommendation for corrective action will be published no later than July 31, 1990.




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A copy of this letter will be forwarded to all of the affected sites referenced in Paragraph 2 of this letter as indicated by the carbon copy list.

Our evaluation of this matter was concluded on July 18, 1990.

Sincerely,

*for*  *DAE*  
Bruce C. Guntrum  
Manager, Quality Assurance

BCG:ej

cc: see attached



ENERGY SERVICES GROUP

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cc:

Gulf States Utilities  
P.O. Box 220  
St. Francisville, LA 70775  
Attention: Director, Nuclear Licensing

Carolina Power and Light Company  
Harris Nuclear Project  
P.O. Box 165  
New Hill, NC 27562  
Attention: Mr. C.S. Hinnant  
Plant General Manager

Carolina Power and Light Company  
Harris Nuclear Project  
P.O. Box 1551  
Raleigh, NC 27602  
Attention: R.A. Watson  
Sr. Vice President

Carolina Power and Light Company  
Harris Nuclear Project  
P.O. Box 165  
New Hill, NC 27562  
Attention: Mr. R.B. VanMetre  
Manager, Technical Support

Carolina Power and Light Company  
Shearson Harris Nuclear Plant  
P.O. Box 165  
New Hill, NC 27562  
Attention: Mr. George Forehand  
Manager, QA/QC

Duke Power Company  
P.O. Box 33189  
Charlotte, NC 28242  
Attention: W.T. Robertson, Jr.  
V.P. Procurement, Services & Materials

Southern California Edison  
P.O. Box 138 D4E  
San Clemente, CA 92672  
Attention: Q.A. Manager



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cc:

Tennessee Valley Authority  
400 W. Summit Hill Drive  
WT10 C126 H-K  
Knoxville, TN 37902-1499  
Attention: R.C. Weir

Sacramento Municipal Utility District  
14440 Twin Cities Road  
Herald, CA 95638  
Attention: Mr. Donald R. Ferguson  
Nuclear Engineering Manager  
M.S. 208-6

Georgia Power Company  
Plant Vogtle  
P.O. Box 1600  
Waynesboro, GA 30830  
Attention: Mr. G. Bockhold, Jr.  
Plant Manager

System Energy Resources  
P.O. Box 756  
Port Gibson, MS 39150  
Attention: C.R. Hutchinson  
General Manager, SERI

System Energy Resources  
P.O. Box 429  
Port Gibson, MS 39150  
Attention: Fred Titus, Director  
Nuclear Plant Engineering

System Energy Resources  
P.O. Box 31995  
Echelon One  
1340 Echelon Parkway  
Jackson, MS 39286-1995  
Attention: Mr. T.H. Cloninger  
V.P. Nuclear Engineering and Support

Long Island Lighting Company  
Shoreham Nuclear Power Station  
North Country Road  
Wading River, NY 11791  
Attention: Manager, Nuclear Operations Support Department



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cc:

Texas Utilities Electric  
Skyway Tower  
400 North Oliver Street  
L.B. 81  
Dallas, TX 75201  
Attention: Mr. W.J. Cahill  
Executive Vice President

Cleveland Electric Illuminating Company  
Perry Nuclear Power Plant  
P.O. Box 97  
Perry, OH 44081  
Attention: A. Kaplan  
Vice President, Nuclear

Cleveland Electric Illuminating Company  
c/o Perry Nuclear Power Plant  
P.O. Box 97  
Perry, OH 44081  
Attention: Mr. E. Riley  
Director, Nuclear Quality Assurance Department

Cleveland Electric Illuminating Company  
c/o Perry Nuclear Power Plant  
P.O. Box 97  
Perry, OH 44081  
Attention: Mr. S. Kensicki  
Director, Perry Plant Technical Department

Tennessee Valley Authority  
1101 Market Street, LP 5N 152B  
Chatanooga, TN 37402  
Attention: Mr. T.W. Overlid  
Manager, Nuclear Experience Review Program

Tennessee Valley Authority  
WT10 B-77 H-K  
400 W. Summit Hill Drive  
Knoxville, TN 37902  
Attention: Tim Chan

Washington Public Power Supply System  
P.O. Box 460  
Richland, WA 99352  
Attention: Mr. L.C. Oakes  
Manager, WNP-1 Engineering



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