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January 29, 1990

W. G. Hairston, III
Senior Vice President
Nuclear Operations

ELV-01271
0212

Docket No. 50-424

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

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
SPECIAL REPORT
INVALID DIESEL GENERATOR FAILURE

In accordance with the requirements of the Vogtle Electric Generating Plant Technical Specifications, Sections 4.8.1.1.3 and 6.8.2, Georgia Power Company is submitting the enclosed Special Report concerning an invalid diesel generator failure.

Sincerely,

W. G. Hairston, III

WGH,III/NJS/gm

Enclosure: Special Report 1-90-01

c(w): Georgia Power Company
Mr. C. K. McCoy
Mr. G. Bockhold, Jr.
Mr. P. D. Rushton
Mr. R. M. Odom
NORMS

U. S. Nuclear Regulatory Commission
Mr. S. D. Ebneter, Regional Administrator
Mr. D. B. Matthews, Director, Project Directorate II-3
Mr. R. F. Aiello, Senior Resident Inspector, Vogtle

START NUMBER/DATE	START REASON/PROC.	DISCUSSION	ALARMS RECORDED
1B-90-119 / 03-13-90	MAINTENANCE TESTING - IN ACCORDANCE WITH PROCEDURE 28713-1, STEPS 4.5.1 THROUGH 4.5.3.	- THE ENGINE WAS OPERATED FOR 10.47 HRS., THEN STOPPED BY THE OPERATOR TO ALLOW PERFORMANCE OF HOT WEB DEFLECTION. - MAX LOAD WAS APPROX. 7000 KW. - THIS RUN WAS CLASSIFIED AS A SUCCESSFUL VALID TEST AS DEFINED IN PROC. 55038-C.	NO ALARMS DOCUMENTED

NOTE 1: PROCEDURE 54055-1, "TRAIN A DIESEL GENERATOR AND ESFAS TEST" IS PERFORMED EVERY 18 MONTHS IN ACCORDANCE WITH TECH. SPEC. SECTION 3/4.8.1.1.2.h. THIS TEST VERIFIES PROPER DIESEL OPERATION DURING LOAD SEQUENCING AND LOAD REJECTION. A COPY OF THE TECH. SPEC. SECTION AND THE PURPOSE SECTION OF PROCEDURE 54055-1 ARE INCLUDED TO PROVIDE THE SPECIFIC DIESEL TEST REQUIREMENTS DURING ESFAS.

NOTE 2: PROCEDURE 28713-1, "SECOND END OF CYCLE DIESEL GENERATOR CHECKOUT," WAS SPECIFICALLY PREPARED FOR THE 1990 OUTAGE ACTIVITY ON THE EDG. THE PROCEDURE IS SO LENGTHY THAT ONLY THE STEPS REFERENCED IN THE TABLE HAVE BEEN INCLUDED IN THIS PACKAGE.

NOTE 3: MAINTENANCE WORK ORDER 19000016 WAS GENERATED TO ALLOW INVESTIGATION OF THE TRIP THAT OCCURRED DURING START NO. 1B-90-110. WHILE NO ALARM WAS RECORDED ON THE DIESEL GENERATOR COMPLETION DATA SHEET, GPC BELIEVES THE LOW PRESSURE TURBOCHARGER OIL RIGHT ALARM WAS RECEIVED. WHEN THE WORK DOCUMENT WAS READY FOR INVESTIGATION TO PROCEED, OPERATIONS PERSONNEL STARTED THE ENGINE FOR TROUBLESHOOTING (CLASSIFIED AS START NO. 1B-90-111). INVESTIGATION REVEALED A SLOWLY VENTING PRESSURE SENSOR ON THE RIGHT BANK TURBOCHARGER. THERE ARE TWO BANKS OF (8) CYLINDERS WITH A TURBOCHARGER FOR EACH BANK. THIS WAS DETERMINED TO BE THE CAUSE OF THE PREVIOUS TRIP. THE ENGINE WAS STOPPED AND THE SENSOR WAS REPLACED PER 19000016. AFTER COMPLETION OF THE WORK, THE ENGINE WAS STARTED AND MONTHLY SURVEILLANCE 14980-1 WAS SUCCESSFULLY PERFORMED (START NO. 1B-90-112). THE DIESEL WAS DECLARED OPERABLE FOLLOWING COMPLETION OF THIS TEST.

NOTE 4: PROCEDURE 54065-1, "TRAIN B DIESEL GENERATOR AND ESFAS TEST" (IDENTICAL TO PROCEDURE 54055 EXCEPT IT IS TRAIN B INSTEAD OF TRAIN A) IS PERFORMED EVERY 18 MONTHS IN ACCORDANCE WITH TECH. SPEC. SECTION 3/4.8.1.1.2.h. THIS TEST VERIFIES PROPER DIESEL OPERATION DURING LOAD SEQUENCING AND LOAD REJECTION. A COPY OF THE TECH. SPEC. SECTION AND THE PURPOSE SECTION OF PROCEDURE 54055-1 ARE INCLUDED TO PROVIDE THE SPECIFIC DIESEL TEST REQUIREMENTS DURING ESFAS. PROCEDURE 54065-1, "TRAIN B DIESEL GENERATOR AND ESFAS TEST" HAS THE SAME REQUIREMENTS AS TRAIN A, THUS, IS NOT PROVIDED. PLEASE SEE NOTE 1.

History of Calcon Sensor Problems at Vogtle (from NUREG-1410 (I-9 → I-14))

II. Unit 1 ~~Construction Testing/Startup~~

	Unit 1 Construction/Startup (9/85 – 12/86)	Unit 2 Const./SU (1/88 – 12/88)	Unit 1 1R1 (9/88 – 10/88)
✓ A. T.O. PS out-of-cal.	3.1, 3.3, 3.4, 3.13		3.26, 3.28
✓ B. T.W. TS out-of-cal.	3.2, 3.6, 3.7, 3.9(3), 3.11, 3.12	3.19, 3.20(3), 3.21(3)	3.22(3), 3.24
✓ C. T.W. PS out-of-cal.	3.5		3.27
✓ D. Turbo Oil PS out-of-cal.	3.8 [redacted]	3.16	
✓ E. L.O. TS out-of-cal.	[redacted]	3.17	
✓ F. T.W. TS defective	3.10		3.25, 3.30, 3.31(2) [3.32 no r
✓ G. LO PS defective	3.14		
✓ H. Vib. switch defective	[redacted]	3.15, 3.18, 3.33	
✓ I. Bearing TS defective			3.23(10)
✓ J. Turbo Oil PS defective			
✓ ~~K. P-3 Relay~~ Normal (P-9) Pressure Trip (2)			3.29 (Def.) 3.29 (Cal.)

	Unit 1 (Cycle 2) (% Percentage)	Unit 1 (1R2) Pre-event	Unit 1 (Cycle 2) Post-event
✓ A.			
✓ B.	3.34, 3.38(3)		3.41(2)
✓ C.		3.39	
✓ D.			
✓ E.	3.37		3.42
✓ F.			3.41(1)
✓ G.	3.35		
✓ H.			
✓ I.		3.40	
✓ J.	3.36		
✓ K.			3.43

SUMMARY OF DIESEL GENERATOR

PRESSURE SENSOR PROBLEMS AT VOGTLE

INSTRUMENT FUNCTION	PROBLEM	UNIT 1 CONSTRUCTION (8/85-12/86)	UNIT 2 CONSTRUCTION (1/88-12/88)	UNIT 1 1R1 (9/88-10/88)	UNIT 1 1R2		POST EVENT
					PRE-OUTAGE	OUTAGE PRE-EVENT	3/20-3/25/90
L. O. Pres.	Out-of-cal.	4		2			
L. O. Pres.	Defective	1			1 (old)		
T. O. Pres.	Out-of-cal.	1	1				
T. O. Pres.	Defective				1 (New)		
W. P. (P-3)	Out-of-cal.			1			
W. P. (P-3)	Defective			1 (old)			1 (old)
J. W. Pres.	Out-of-cal.	1		1		1	