

Docket No: 50-259  
50-260  
and 50-296

JUL 20 1981



Mr. H. G. Parris  
Manager of Power  
Tennessee Valley Authority  
500 Chestnut Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

Subject: Information Request Regarding Station Blackout, Unresolved  
Safety Issue A-44, Browns Ferry, Units 1, 2, and 3

The NRC staff is currently addressing Unresolved Safety Issue (USI) A-44, Station Blackout. The purpose of this work is to establish the safety significance of an event resulting in a loss of all alternating current power and, if significant, to consider the need for any specific changes. Over the past several years information requests have been forwarded which requested information that is being used in the USI analysis. Your interest and cooperation in the past have been appreciated.

At this time the USI A-44 effort is being directed toward determining the reliability of the onsite standby diesel generators. The enclosed questionnaire has been prepared to provide accurate operating experience to serve as a basis for such a determination. More specifically, its purpose is to obtain more detailed data than were available in previous diesel generator studies such as AEC-00E-ES-002, NUREG/CR-0660, and NUREG/CR-1362.

The questionnaire (enclosure 1) requests information in tabular form and solicits data for the years 1976 through 1980, inclusive. There are four tables enclosed: (1) Diesel Generator Operations Data, (2) Diesel Generator Scheduled Down Time Record, (3) Diesel Generator Unscheduled Down Time Record, and (4) Onsite Emergency Diesel Generator and Auxiliary Equipment Modification Record. Also enclosed are examples of completed tables as well as a clarification of what should be entered. Please note that, although it may appear that only Licensee Event Report (LER) information is sought, data on all diesel generator malfunctions, independent of whether an LER was prepared, is requested.

Please find enclosed LER documentation (enclosure 2) presently docketed for your facility. You are requested to review these and to indicate if there are other reports which have not been enclosed. Finally, please find enclosed a copy of the appropriate portions of your response (enclosure

OFFICE							
SURNAME	B107290247	B10720					
DATE	PDR	ADOCK	05000259				
	P		PDR				

Mr. H. G. Parris

- 2 -

3) to our letter of March 6, 1978 which requested related, but different, information. This is being forwarded for your information only and should aid in preparing Tables 1 through 4.

In consideration of the time and effort necessary to obtain this information, the completion of Table 4 should be considered voluntary. However, it should be noted that if operational and hardware modifications are not identified, the positive or negative influence of these features on emergency alternating current power reliability may be lost in the evaluation of the data. The expected effect is that our generic reliability estimates may be lower than that which actually exists.

The above information is requested in accordance with Sections 103.b.(3) and 161.c of the Atomic Energy Act of 1954, as amended. To meet our schedule requirements for the resolution of USI A-44 and to incorporate as much real experience as possible into the reliability model for emergency power systems, it is requested that your response be provided within 120 days of the receipt of this letter. However, if this schedule is inconsistent with priority requirements for other licensing work, please provide us with your proposed date of response within 30 days. We plan to complete our analysis of this data by February 1982. Your data should be provided by that time so that an accurate assessment of onsite alternating current power sources can be made.

Mr. P. Baranowsky has been designated Task Manager for USI A-44. Should you have any questions, please feel free to contact him at (301) 443-5921. Your time and efforts are appreciated.

DISTRIBUTION

Docket Files 50-259/260/296  
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 Enclosures: F. Schroeder  
 As Stated T. Murley  
 P. Baranowsky  
 cc: w/enclosures J. Butts  
 See next page

Sincerely,

*Philip J. Palk for*  
 Thomas A. Ippolito, Chief  
 Operating Reactors Branch #2  
 Division of Licensing

This request for information was approved by the Office of Management and Budget under clearance number 3150-0067 which expires May 31, 1983. Comments on burden and duplication may be directed to the Office of Management and Budget, Washington, D. C. 20503.

OFFICE	DST:GIB	DL:ORB#2	DL:ORB#2	DL:ORB#2		
SURNAME	PNorian:jb	PPolk	RJClark	TAIppolito		
DATE	07/17/81	07/17/81	07/17/81	07/17/81		

Mr. Hugh G. Parris

cc:

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~~Mr.~~ Herbert Abercrombie  
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TABLE 4

Onsite Emergency Diesel Generator and  
Auxiliary Equipment Modification Record

Enclosure 1 - Page 4  
Plant Name \_\_\_\_\_  
Unit No. \_\_\_\_\_

Equipment or procedure modified	Date of Mod.	Reason for Modification and Desired Improvement	Description of Modification

TABLE ENTRIES  
EXPLANATION/CLARIFICATION

Table 1

**Reason for DG Operation and Scheduled Duration of Run:** This column contains the different categories of diesel generator operation. The categories are structured such that the start and run conditions are similar for all of the tests in a category. In this column, enter the scheduled run duration for each of the test categories. Also enter the number of diesel generator starts that are done for each type of test. For example, if on the monthly test there is one start from the local controls and one start from the remote controls, the number of starts per test is two. If two or more diesels are started simultaneously for any reason, please record it as a multiple start.

**DG No.:** Enter each diesel generator's identification number in this column as shown in the example.

**Number of Starts:** Enter the sum of the successful and unsuccessful start attempts for each category. If there are several starts for each test, include all of them, but be certain to record the number of starts per test in column one.

**Number of Failures:** Enter the sum of the failures for each category. A failure is counted if the objectives of the test are not achieved. A subsystem failure that does not cause failure of the diesel generator system is not counted as a failure. If the diesel generator did not start, run, and load as required by the test, a failure should be recorded. However, if the diesel generator would have supplied power in some capacity for an emergency, please explain in Table 3. For example, if the diesel started on the second attempt or the diesel was tripped to repair a minor oil leak that would not have been a problem in an emergency, this should be noted in Table 3.

**Percent Loading of DG (KW):** Enter the percentage that the diesel is loaded for each category. The continuous kilowatt rating is considered to be 100%.

**Duration of Run Before Stop for each DG Failure:** Record the run-time for each failure. If the diesel failed to start, the run-time would be 0 min.

**Identification of Failures:** Attached to this questionnaire are abstracts of the LEKs related to the diesel generators. The abstracts are numbered starting with one. Refer to this number to identify the failures, but if there was a failure for which there is no abstract, assign the failure a number and include it in Table 3.

Table 2

**Reason for Downtime:** Enter in this column the categories of schedule maintenance that make the diesel generator unavailable for emergency service. If the diesel generator is unavailable for emergency service during surveillance testing, report that also.



Table 2 (cont'd)

Hours of Downtime: Enter the number of hours that the diesel generator is unavailable for emergency service. Report the hours under the column reactor shutdown or reactor not shutdown as appropriate.

Comments: Comment on time to return to service after maintenance has begun, or other pertinent information.

Table 3

LER Abstract No. (Refer to attached LER Abstracts): The attached LERs are numbered starting from one. Refer to this LER number in column one. Each LER abstract should have an entry in this table. If there was a failure not included in the attached abstracts, please assign it a number and enter it in this table.

Downtime Hours: Enter the number of hours that the diesel generator is unavailable for emergency service. Subdivide these total hours into troubleshooting, parts delivery, and repair or replacement.

Comments: Use this column to comment on the downtime and the failure. If the reported failure was only a technical specification violation, but would not be a complete failure of the diesel generator to supply power or would only be a delay, please elaborate in this column.

Table 4

Equipment or procedure modified: List in this column the equipment or procedures related to the emergency onsite power system that have been modified since the reactor became critical.

Date of Mod.: Enter the date that the modification was completed.

Reason for Modification and Desired Improvement: Report the reason for the modification and the desired or observed improvement in the system.

Description of Modification: Briefly describe what modification was made.

Diesel Generator Operations Data  
 Calendar Year 1976

TABLE 1  
 (Sample)

Reason for DG Operation, & scheduled Duration of Run	DG No.	Number of Starts	Number of Failures	Percent Loading of DG (KW)	Duration of Run Before Stop For Each DG Failure	Identification of Failures (Refer to attached LERs or Table 3)
Tech. Spec Req'd Test						
Monthly Surveillance						
(1 hour)	1	12	2	100	30 min; 0 min	LER # 1 & 4
(1 start/test)	2	12	0	100	--	
	3	12	1	100	0 min	LER # 2
Refueling Outage						
(12 hours)	1	1	0	100	--	
(1 start/test)	2	1	0	100	--	
	3	1	1	100	1 hour	LER # 3
Misc. Tech Spec						
Req'd Tests	1	2	0	100	--	Table 3 No. 9
(Start Only)	2	4	0	100	--	
(1 start/test)	3	2	0	100	--	
LG Actual Demand						
Starts not for Testing						
SIAS Signal	1	1	0	0	--	LER # 8 Multiple start of 3 DGs
(1 hour)	2	1	0	0	--	"
	3	1	0	0	--	"
Miscellaneous Tests						
(Specify Type)						
Verify Repairs (not full test)	1	6	0	1	0 min	Table 3 # 10
(Start Only)	2	4	0	0		
	3	4	0	0		

TABLE 2  
(Sample)

Diesel Generator Scheduled Downtime Record  
Calendar Year 19\_\_

Enclosure 1 - Page 8  
Plant Name \_\_\_\_\_  
Unit No. \_\_\_\_\_

Reason for Downtime	Hours of Downtime										Comments	
	Reactor shutdown					Reactor not shutdown						
	DC# 1	DC# 2	DC# 3	DC#	DC#	DC# 1	DC# 2	DC# 3	DC#	DC#		
Scheduled Maintenance												
Preventive Maintenance Semi-annual & Annual	24	16	--					16				
Equipment Modification						8	8	8				Modified lube oil on each diesel. Diesels down at different times.
Time DG is unavailable for emergency service because of required tests Down 4 hrs per test		8				48	40	48				Diesel cannot be automatically started during test or for three hours afterwards

TABLE 3  
(Sample)

Diesel Generator Unscheduled Downtime Record  
Calendar Year 19\_\_

Enclosure 1 - Page 9  
Plant Name XXX  
Unit No. 162

LER Abstract No. (Refer to attached LER Abstracts)	Downtime Hours				Comments - If any of the reported failures would not have been a failure under emergency conditions, please explain here. Refer to attached LERs or the failures listed in Table 1.
	Total Hours	Trouble-shooting	Parts, Delivered, etc.	Repair/replace	
1	4	1	1	2	
2	3	0.5	1	1.5	
3	12	1	10	1	
4	0	0	0	0	Diesel started in 15 sec instead of required 10 sec
5	0	0	0	0	Secondary air pressure low. Primary air satisfactory.
6	0	0	0	0	Secondary air pressure low. Primary air satisfactory.
7	0	0	0	0	Diesel started in 20 sec instead of required 10 sec.
8	0	0	0	0	False DG start signal. DG satisfactory
No LER					
9	0	0	0	0	Required DG starts after the failure of one diesel.
10	0	0	0	0	Starts to verify repairs.

TABLE 4  
(Sample)

Onsite Emergency Diesel Generator and  
Auxiliary Equipment Modification Record

Enclosure 1 - Page 10

Plant Name \_\_\_\_\_

Unit No. \_\_\_\_\_

Equipment or procedure modified	Date of Mod.	Reason for Modification and Desired Improvement	Description of Modification
Lube oil system	2/76	Improve turbo charger lubrication for emergency starts.	Soak-back pump was removed and replaced with a continuous lube oil pump. New pump also continuously lubricates the crankshaft.
Relay cabinets	1/78	Prevent dirt from fouling relay contacts.	Cabinet doors with gaskets were installed.
Instrument Relocation	6/79	Eliminate vibration damage to instruments	Control and monitoring instrument panel was relocated from the engine skids to a free standing panel mounted on the engine room floor.

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1

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ACCESSION NO. 0020163337  
 TITLE DIESEL GENERATOR BREAKER TRIPS AT BROWNS FERRY I  
 CORPAUTH TENNESSEE VALLEY AUTHORITY  
 DATE 1980  
 TYPE Q  
 MEMO LTR W/LETR 80-088 TO U.S. NRC, REGION 2, DEC 31, 1980. DOCKET 50-259, TYPE--BWR, MFG--GE, AE--TVA, DCS NO.--8101090667  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (65 CENTS/PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 120280. POWER LEVEL - 095%. CAUSE - FAULTY DIODE IN TRIP CIRCUIT. WHILE TESTING, DIESEL GENERATOR 1C THE BREAKER 1812 ON 4KV SHUTDOWN BOARD C TRIPPED. AFTER NO TARGETS WERE FOUND ON THE PROTECTIVE RELAYS THE BREAKER WAS RECLOSED AND TEST COMPLETED. A FAULTY DIODE IN OVERSPEED TRIP ANNUNCIATOR RELAY CIRCUIT PERMITTED SPURIOUS SIGNAL TO OPERATE OVERSPEED TRIP RELAY. DIODE WAS REPLACED AND TEST WAS SUCCESSFULLY PERFORMED. INTERNATIONAL RECTIFIER, DIODE, MODEL 1CD10.  
 COMPONENT CODE CKTBRK-CIRCUIT CLOSERS/INTERRUPTERS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

17/5/0000001-0000009//

2

ACCESSION NO. 0020158727  
 TITLE DIESEL GENERATOR FAILS TO START FOLLOWING LOSS OF SHUTDOWN BOARD AT BROWNS FERRY I  
 CORPAUTH TENNESSEE VALLEY AUTHORITY  
 DATE 1980  
 TYPE Q  
 MEMO LTR W/LETR 80-052 TO U.S. NRC, REGION 2, JUL 25, 1980. DOCKET 50-259, TYPE--BWR, MFG--GE, AE--TVA  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (68 CENTS/PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 062880. POWER LEVEL - 099%. CAUSE - OPERATOR ERROR. DURING NORMAL OPERATION 4 KV SHUTDOWN BOARD B TRIPPED ON DEGRADED VOLTAGE INITIATING AUTO START OF D/G B. IN PARALLELING D/G TO SYSTEM, THE MODE SWITCH WAS NOT PLACED IN PARALLEL WITH SYSTEM WHICH LED TO D/G TRIPPING ON LOSS OF EXCITATION. WHEN 4 KV SHUTDOWN BOARD B TRIPPED AGAIN ON DEGRADED VOLTAGE, D/G TRIPPED ON MECHANICAL OVERSPEED BECAUSE FIELD BREAKER HAD NOT BEEN RESET FROM FIRST TRIP LEAVING THE SHUTDOWN BOARD DEENERGIZED. NO PREVIOUS OCCURRENCE. DIESEL GENERATOR TRIPPED FIRST DUE TO IMPROPER SWITCH ALIGNMENT. SECOND TIME DUE TO FAILURE TO CLOSE FIELD BREAKER AFTER FIRST TRIP. OPERABILITY OF OTHER D/G'S AND UNIT 1 & 2 CSS AND RHRS WERE VERIFIED. 480 V SHUTDOWN BOARD 2A WAS ENERGIZED FROM ALTERNATE SOURCE. 4 KV SHUTDOWN BOARD B AND D/G B WERE RETURNED TO SERVICE. TRAINING CONCERNING EVENT WILL BE COVERED IN SUPPLEMENTARY TRAINING.  
 COMPONENT CODE CKTBRK-CIRCUIT CLOSERS/INTERRUPTERS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

17/5/0000001-0000009//

3

ACCESSION NO. 0020154441  
 TITLE DIESEL GENERATOR SPEED CONTROL LOST AT BROWNS FERRY I  
 CORPAUTH TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN  
 DATE 1980  
 TYPE Q  
 MEMO 3 PGS. LTR W/AFRD-50-259/801 TO NRC OFFICE OF I & E, REGION 11, JAN. 18, 1980. DOCKET 50-259, TYPE--BWR, MFG--GE, AE--TVA  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (68 CENTS/PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 010780. POWER LEVEL - 000%. CAUSE - SPEED PICK-UP COUPLING BROKEN. WITH UNIT 3 IN COLD SHUTDOWN WHILE PERFORMING TESTS IN ACCORDANCE WITH IE BULLETIN 79-23, SPEED CONTROL ON THE 3A DIESEL GENERATOR WAS LOST. UNIT 3B, C, AND D DIESEL GENERATORS WERE OPERABLE. THERE HAVE BEEN NO PREVIOUS SIMILAR EVENTS. THE COUPLING WHICH CONNECTS THE SPEED PICK-UP TO THE GENERATOR SHAFT HAD BROKEN. A SPECIAL INSTRUCTION WAS WRITTEN TO INSPECT ALL OTHER DIESEL GENERATORS. COUPLINGS WERE INSPECTED ON ALL DIESEL GENERATORS. LOVEJOY, 1/2 INCH FLEX, MODEL L090/95.



COMPONENT CODE MECFUN-MECHANICAL FUNCTION UNITS  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONT DLS

17/5/0000001-000000977 4

ACCESSION NO. 0020148203  
TITLE DIESEL FUEL OIL SAMPLES NOT ANALYZED AT BROWNS FERRY 1  
CORPAUTH TENNESSEE VALLEY AUTHORITY  
DATE 1979  
TYPE 0  
MEMO LTR W/LER 79-004 TO U.S. NRC, REGION 2, MAR 16, 1979, DOCKET

AVAIL

50-259, TYPE--BWR, MFG--GE, AE--TVA CONTROL--025362  
AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
WASHINGTON D.C. 20555, (08 /PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT

DATE OF EVENT - 022279, POWER LEVEL - 099%, CAUSE - LOST IN  
TRANSIT. DURING NORMAL OPERATION, REVIEW OF SURVEILLANCE TEST  
DATA INDICATED THAT MONTHLY SAMPLES OF DIESEL FUEL OIL TAKEN IN  
DECEMBER 1978 HAVE NOT BEEN ANALYZED AS REQUIRED BY T.S.  
4.9.A.1.e. THE DECEMBER 1978 DIESEL FUEL SAMPLES WERE LOST IN  
TRANSIT TO AN OFFSITE LABORATORY WHERE THEY HAVE BEEN SENT FOR  
ANALYSIS. EFFORTS TO LOCATE THE SAMPLES WERE UNSUCCESSFUL.  
SAMPLES TAKEN THE PRECEDING AND SUCCEEDING MONTHS WERE  
SATISFACTORY. MEASURES WILL BE TAKEN TO ANALYZE SAMPLES ON  
SITE TO AVOID THIS TYPE OF OCCURRENCE.

COMPONENT CODE ENGINE-ENGINES, INTERNAL COMBUSTION  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

17/5/0000001-000000977 5

ACCESSION NO. 0020140040  
TITLE DIESEL GENERATOR FIELD BREAKER TRIPS DUE TO THERMAL HEATING AT  
BROWNS FERRY 1  
CORPAUTH TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN  
DATE 1978  
TYPE 0  
MEMO 2 PGS, LTR W/BFRD-50-259/7822 TO NRC OFFICE OF I & E, REGION

AVAIL

II, AUG. 3, 1978, DOCKET 50-259, TYPE--BWR, MFG--GE, AE--TVA  
AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE  
\$2.00)

ABSTRACT

DATE OF EVENT - 070978, POWER LEVEL - 0%, CAUSE - LOUVERS  
BENT INTO COOLING FAN BLADES. WHILE UNITS 1 AND 2 WERE IN HOT  
STANDBY, THE FIELD BREAKER FOR DIESEL GENERATOR 1C TRIPPED DUE  
TO THERMAL HEATING. THIS CAUSED THE DIESEL GENERATOR TO BECOME  
INOPERABLE. THE FIELD BREAKER THERMALLY TRIPPED WHEN THE  
CONTROL CABINET OVERHEATED DUE TO A COOLING FAN BEING  
INOPERABLE. THE PROTECTIVE LOUVERS HAD BEEN BENT INTO THE FAN  
BLADE WHILE REMOVING SCAFFOLDING. THE LOUVERS WERE  
STRAIGHTENED AND THE FAN RAN SATISFACTORY. OTHER LOUVERS WERE  
CHECK'D AND REPAIRED.

COMPONENT CODE BLOWER-BLOWERS  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

17/5/0000001-000000977 6

ACCESSION NO. 0020123164  
TITLE TWO HEAT DETECTORS IN FIRE PROTECTION SYSTEM FAIL AT BROWNS  
FERRY 1  
CORPAUTH TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN  
DATE 1977  
TYPE 0  
MEMO 2 PGS, LTR W/BFRD-50-259/776 TO NRC OFFICE OF I & E, REGION II,

AVAIL

MARCH 16, 1977, DOCKET 50-259, TYPE--BWR, MFG--G.E., AE--TVA  
AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE  
\$2.00)

ABSTRACT

DATE OF EVENT - 021577, POWER LEVEL - 90%, CAUSE - FAIL TO  
RESPOND TO HEAT. DURING TESTING, 2 HEAT DETECTORS WHICH WOULD  
NOT ALARM WERE FOUND IN THE FIRE PROTECTION SYSTEM FOR THE  
RECIRC MG SETS. THEY WOULD NOT RESPOND TO HEAT. THE KIDDE  
TYPE S-16-R DETECTORS WHICH FAILED WERE REPLACED WITH A NEW  
TYPE DETECTOR, FENWAL TYPE 27121-D.

COMPONENT CODE INSTRU-INSTRUMENTATION AND CONTROLS  
SYSTEM CODE AB-FIRE PROTECTION SYS & CONT

ACCESSION NO. 0020120403  
 TITLE START CIRCUIT BREAKER ON DIESEL GENERATOR FOUND INOPERABLE AT  
 BROWNS FERRY 1  
 CORPAUTH TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN  
 DATE 1976  
 TYPE Q  
 MEMO 2 PGS, LTR W/BFRD-50-259/7625 TO NRC OFFICE OF I & E, REGION  
 II, DEC. 8, 1976, DOCKET 50-259, TYPE--BWR, MFG--G.E., AE--TVA  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
 WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE  
 \$2.00)  
 ABSTRACT CAUSE - BROKEN STUD HOLDER ON CONNECTOR, DURING TESTING WITH  
 THE REACTOR AT 40% POWER, ONE START CIRCUIT BREAKER ON DIESEL  
 GENERATOR B WAS FOUND INOPERABLE. THE SQUARE D CO. 30 AMP  
 BREAKER NO. L25V909 FAILED TO SUPPLY POWER BECAUSE OF A BROKEN  
 STUD HOLDER ON CONNECTION A. THE BREAKER WAS REPLACED.

17/5/0000001-000000977

8

ACCESSION NO. 0020119752  
 TITLE DIESEL GENERATOR HAS ERRATIC SPEED BEHAVIOR AT BROWNS FERRY 1  
 CORPAUTH TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN  
 DATE 1976  
 TYPE Q  
 MEMO 2 PGS, LTR W/BFRD 50-259/7623 TO NRC OFFICE OF I & E, REGION  
 II, NOV. 24, 1976, DOCKET 50-259, TYPE--BWR, MFG--G.E., AE--TVA  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
 WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE  
 \$2.00)  
 ABSTRACT CAUSE - DIRTY OIL IN GOVERNOR ACTUATOR, DURING TESTING WITH  
 THE REACTOR AT 30% POWER, DIESEL GENERATOR D EXHIBITED ERRATIC  
 SPEED BEHAVIOR UNDER LOAD. THE APPARENT CAUSE WAS DIRTY OIL IN  
 THE WOODWARD GOVERNOR MODEL EG-810 ACTUATOR. THE OIL WAS  
 CHANGED AND THE DIESEL TESTED SATISFACTORILY AND RETURNED TO  
 SERVICE.

17/5/0000001-000000977

9

ACCESSION NO. 0020110319  
 TITLE DIESEL GENERATOR FAILS TO START AT BROWNS FERRY 1 AND 2  
 CORPAUTH TENNESSEE VALLEY AUTHORITY, CHATTANOOGA, TN  
 DATE 1976  
 TYPE Q  
 MEMO 2 PGS, LTR W/ADS BFA0-50-259/761W AND BFA0-50-260/762W TO NRC  
 DIRECTOR OF NUCLEAR REACTOR REGULATION, JAN. 23, 1976, DOCKETS  
 50-259/260, TYPE--BWR, MFG--G.E., AE--TVA  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
 WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE  
 \$2.00)  
 ABSTRACT CAUSE - HYDRAULIC ACTUATOR MALFUNCTION, DURING A TEST, DIESEL  
 GENERATOR D FAILED TO START. THE HYDRAULIC ACTUATOR DID NOT  
 RESPOND PROPERLY TO SIGNALS FROM THE ELECTRIC GOVERNOR. OIL  
 WAS ADDED TO THE HYDRAULIC ACTUATOR AND ADJUSTMENTS MADE. THE  
 DIESEL THEN STARTED SUCCESSFULLY. FUEL FOR BOTH UNITS WAS  
 REMOVED FROM THE VESSEL AND STORED IN THE SPENT FUEL POOL AT  
 THIS TIME.