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JUL 21 1981

Docket No. 50-334

Mr. J. J. Carey, Vice President  
Duquesne Light Company  
Nuclear Division  
Post Office Box 4  
Shippingport, PA 15077

Dear Mr. Carey:

Subject: Information Request Regarding Station Blackout, Unresolved  
Safety Issue A-44, Beaver Valley Power Station, Unit 1

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-GOE-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

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PDR ADOCK 05000334  
P PDR

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
SURNAME ▶	.....	.....	.....	.....	.....	.....	.....
DATE ▶	.....	.....	.....	.....	.....	.....	.....

Mr. J. J. Carey

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

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J. roe	K. Kniel

Sincerely,

Original signed by:  
S. A. Varga

Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing

Enclosures:  
As Stated

F. Schroeder
T. Murley
P. Baranowsky

cc: w/enclosures  
See next page

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	DS/GIB	DL:ORB#2	DL:ORB#1	DL:ORB#1		
SURNAME	PNorian:jl	PPolk	DChaney	SAVarga		
DATE	07/17/81	07/17/81	07/20/81	07/20/81		

Mr. J. J. Carey  
Duquesne Light Company

cc: Mr. R. J. Washabaugh, QA Manager  
Duquesne Light Company  
Quality Assurance Department  
Post Office Box 4  
Shippingport, Pennsylvania 15077

Mr. J. A. Werling  
Station Superintendent  
Duquesne Light Company  
Beaver Valley Power Station  
Post Office Box 4  
Shippingport, Pennsylvania 15077

Mr. T. D. Jones, Manager  
Nuclear Operations  
Duquesne Light Company  
Post Office Box 4  
Shippingport, Pennsylvania 15077

Mr. F. J. Bissert, Manager  
Nuclear Support Services  
Duquesne Light Company  
Nuclear Division  
Post Office Box 4  
Shippingport, Pennsylvania 15077

Mr. R. M. Mafrice, Nuclear Engineer  
Duquesne Light Company  
435 Sixth Avenue  
Pittsburgh, Pennsylvania 15219

Mr. R. E. Martin, Nuclear Engineer  
Duquesne Light Company  
435 Sixth Avenue  
Pittsburgh, Pennsylvania 15219

Mr. N. R. Tonet, Manager  
Nuclear Engineering  
Duquesne Light Company  
Nuclear Division  
Post Office Box 4  
Shippingport, Pennsylvania 15077

Mr. J. D. Sieber, Manager  
Nuclear Safety & Licensing  
Duquesne Light Company  
Nuclear Division  
Post Office Box 4  
Shippingport, Pennsylvania 15077

Gerald Charnoff, Esquire  
Jay E. Silberg, Esquire  
Shaw, Pittman, Potts and Trowbridge  
1800 M Street, N. W.  
Washington, D. C. 20036

Karin Carter, Esquire  
Special Assistant Attorney General  
Bureau of Administrative Enforcement  
5th Floor, Executive House  
Harrisburg, Pennsylvania 17120

Mr. Roger Tappan  
Stone & Webster Engineering Corporation  
P. O. Box 2325  
Boston, Massachusetts 02107

Mr. F. Noon  
R & D Center  
Westinghouse Electric Corporation  
Building 7-303  
Pittsburgh, Pennsylvania 15230

Marvin Fein  
Utility Counsel  
City of Pittsburgh  
313 City-County Building  
Pittsburgh, Pennsylvania 15219

Mr. John A. Levin  
Public Utility Commission  
P. O. Box 3265  
Harrisburg, Pennsylvania 17120

Irwin A. Popowsky, Esquire  
Office of Consumer Advocate  
1425 Strawberry Square  
Harrisburg, Pennsylvania 17120

Charles E. Thomas, Esquire  
Thomas and Thomas  
212 Locust Street  
Box 999  
Harrisburg, Pennsylvania 17108

Resident Inspector  
U. S. Nuclear Regulatory Commission  
Post Office Box 298  
Shippingport, Pennsylvania 15077





TABLE 3

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

Enclosure 1 - Page 3

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

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

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, Delivery, etc.	Repair/replace	

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 LERs 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

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	--	
DG 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	1	6	0	1	0 min	Table 3 # 10
(not full test)	2	4	0	0		
(Start Only)	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, Delivery, 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.

1675/0000001-000002277 1

ACCESSION NO. 0020160191  
 TITLE DC CIRCUIT BREAKER FAILS TO CLOSE AT BEAVER VALLEY 1  
 CORP AUTH DUQUESNE LIGHT CO.  
 DATE 1980  
 TYPE G  
 MEMO LTR W/LER 80-047 TO U.S. NRC, REGION 1, SEP 4, 1980, DOCKET 50-334, TYPE--PWR, MFG--WEST, AE--S&W

AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT DATE OF EVENT - 080580. POWER LEVEL - 000%. CAUSE - DIRTY CONTACTS. THE OUTPUT CIRCUIT BREAKER (1E9) OF THE NO. 1 EMERGENCY DIESEL GENERATOR FAILED TO CLOSE WHEN THE OPERATOR TRIED TO PARALLEL IT TO THE ENERGIZED EMERGENCY BUS. WHEN THE DIESEL GENERATOR IS OPERATED IN THE EXERCISE MODE, THERE ARE PERMISSIVES IN THE CIRCUIT BREAKER THAT ARE ACTUATED BY THE MANUAL START RELAY CONTACTS. SINCE THE RELAY WOULD NOT LATCH IN DUE TO DIRTY CONTACTS, THE PERMISSIVES COULD NOT MAKE TO ALLOW THE BREAKER TO CLOSE. THE RELAY CONTACT BLOCK HAS BEEN CHANGED OUT AND THE DIESEL TESTED SATISFACTORILY.

COMPONENT CODE CKTBK-CIRCUIT CLUSERS/INTERRUPTERS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 2

ACCESSION NO. 0020158737  
 TITLE DIESEL GENERATOR GOVERNOR CONTROL MOTOR FAILS AT BEAVER VALLEY 1  
 CORP AUTH DUQUESNE LIGHT CO.  
 DATE 1980  
 TYPE G  
 MEMO LTR W/LER 80-033 TO U.S. NRC, REGION 1, JUL 15, 1980, DOCKET 50-334, TYPE--PWR, MFG--WEST, AE--S&W

AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT DATE OF EVENT - 061780. POWER LEVEL - 000%. CAUSE - OPERATOR ERROR. THE DIESEL GENERATOR NO. 1 GOVERNOR CONTROL MOTOR FAILED DURING AN EMERGENCY DIESEL SHUTDOWN AFTER A FAST START. THE GOVERNOR MOTOR FAILED DUE TO CYCLING OF THE GOVERNOR WHILE ATTEMPTING TO SHUT DOWN THE DIESEL WITH A FAST START SIGNAL STILL APPLIED. THE GOVERNOR MOTOR WAS REPLACED WITH A NEW MOTOR. A LETTER WILL BE WRITTEN TO THE OPERATORS TO INSTRUCT THEM NOT TO ATTEMPT TO SHUT DOWN A DIESEL WITH A FAST SIGNAL STILL APPLIED.

COMPONENT CODE MOTORS-MOTORS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 3

ACCESSION NO. 0020152900  
 TITLE DC BACKUP FUEL OIL PUMP SUCTION LINE BLOCKED BY FOREIGN MATTER AT BEAVER VALLEY 1  
 CORP AUTH DUQUESNE LIGHT CO., PITTSBURGH, PA  
 DATE 1980  
 TYPE G  
 MEMO 3 PGS, LTR W/LER 79-48 TO U.S. NRC, REGION 1, FEB. 7, 1980, DOCKET 50-334, TYPE--PWR, MFG--WEST, AE--S&W

AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT DATE OF EVENT - 121079. POWER LEVEL - 000%. CAUSE - SIGNIFICANT QA PROGRAM BREAKDOWN. DURING PERFORMANCE OF THE 24-HOUR LOAD TEST ON THE NO. 2 EMERGENCY DIESEL GENERATOR, THE DISCHARGE PRESSURE GAUGE OF THE BACKUP ELECTRIC FUEL OIL PUMP WAS DISCOVERED INDICATING ZERO. THE TEST WAS COMPLETED USING THE NORMAL ENGINE-DRIVEN FUEL OIL PUMP. FOLLOWING THE TEST, MAINTENANCE FOUND A SILICA GEL DESSICANT BAG IN THE ENGINE MOUNTED FUEL TANK, BLOCKING THE SUCTION LINE TO THE ELECTRIC FUEL PUMP. THE EMERGENCY GENERATOR REMAINED OPERABLE AND THE SILICA GEL HAS NO DETRIMENTAL EFFECTS ON FUEL OIL. THE INCIDENT RESULTED FROM A SIGNIFICANT BREAKDOWN IN THE QUALITY ASSURANCE PROGRAM DURING CONSTRUCTION. IT IS UNKNOWN WHEN THE DESSICANT WAS INTRODUCED INTO THE TANK. A SIMILAR BAG WAS FOUND IN THE NO. 1 EMERGENCY DIESEL GENERATOR FUEL OIL TANK. THE EXTERNAL DAY TANKS WILL BE INSPECTED FOR FOREIGN MATERIALS.

COMPONENT CODE PUMPXX-PUMPS  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 4  
ACCESSION NO. 0020152997  
TITLE DIESEL FUEL SAMPLES NOT ANALYZED WHEN REQUIRED AT BEAVER VALLEY  
1  
CORP AUTH DUQUESNE LIGHT CO.  
DATE 1979  
TYPE G  
MEMO LTR W/LEK 79-043 TO U.S. NRC, REGION 1, NOV 15, 1979, DOCKET  
50-334, TYPE--PWR, MFG--WEST, AE--S+W CONTROL--027382  
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
WASHINGTON D.C. 20555, (08 /PAGE -- MINIMUM CHARGE \$2.00)  
ABSTRACT DATE OF EVENT - 030179, POWER LEVEL - 000%, CAUSE - DEFECTIVE  
PROCEDURES, DURING ROUTINE AUDIT OF CHEMISTRY RECORDS 10/22/79,  
IT WAS OBSERVED THAT DURING THE PERIOD MARCH THROUGH SEPTEMBER,  
1979, THERE WERE SEVERAL OCCASIONS WHEN ANALYSIS OF THE DIESEL  
FUEL SAMPLES WAS NOT COMPLETED WITHIN THE REQUIRED TIME. THE  
SAMPLES WERE IMMEDIATELY ANALYZED AND FOUND TO BE WITHIN  
ACCEPTABLE LIMITS FOR VISCOSITY, WATER AND SEDIMENT. CHEMISTRY  
PERSONNEL FAILED TO ANALYZE SAMPLES WITHIN ALLOWABLE TIME  
LIMITS BECAUSE OF INCOMPLETE INSTRUCTIONS IN CHEMISTRY MANUAL  
FOR MODES 5 & 6. CHEMISTRY MANUAL WAS REVISED TO CLARIFY TECH  
SPEC SAMPLING AND ANALYSIS REQUIREMENTS. CHEMISTRY PERSONNEL  
WERE ISSUED LETTERS STRESSING THE IMPORTANCE OF TIMELY ANALYSIS  
OF SAMPLES.  
COMPONENT CODE ZZZZZZ-COMPONENT CODE NOT APPLICABLE  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 5  
ACCESSION NO. 0020152182  
TITLE DIESEL GENERATOR HAS SHORT FIRST SEQUENCE INTERVAL AT BEAVER  
VALLEY 1  
CORP AUTH DUQUESNE LIGHT CO.  
DATE 1979  
TYPE G  
MEMO LTR W/LEK 79-031 TO U.S. NRC, REGION 1, SEP 07, 1979, DOCKET  
50-334, TYPE--PWR, MFG--WEST, AE--S+W CONTROL--026989  
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
WASHINGTON D.C. 20555, (08 /PAGE -- MINIMUM CHARGE \$2.00)  
ABSTRACT DATE OF EVENT - 080779, POWER LEVEL - 000%, CAUSE - SEQUENCE  
OFF ZERO. DURING SURVEILLANCE TESTING OF THE NO. 1 EMERGENCY  
DIESEL GENERATOR SEQUENCING CIRCUIT, THE FIRST LOADING SEQUENCE  
INTERVAL WAS 4.106 SECONDS RATHER THAN THE REQUIRED 4.500  
SECONDS. THE DIESEL GENER. IS CAPABLE OF ACCEPTING FULL  
LOAD IN 3.5 SECONDS AS DEMONSTRATED BY THE MANUFACTURER'S 150  
TEST RUNS. THE SHORT FIRST INTERVAL RESULTED BECAUSE THE  
STARTING POINT OF THE SEQUENCER WAS SLIGHTLY OFF ZERO. THE  
SEQUENCER WAS CYCLED AND ADJUSTED TO WITHIN SPECIFICATIONS.  
COMPONENT CODE INSTRU-INSTRUMENTATION AND CONTROLS  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 6  
ACCESSION NO. 0020151945  
TITLE DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BEAVER VALLEY  
1  
CORP AUTH DUQUESNE LIGHT CO.  
DATE 1979  
TYPE G  
MEMO LTR W/LEK 79-023 TO U.S. NRC, REGION 1, AUG 23, 1979, DOCKET  
50-334, TYPE--PWR, MFG--WEST, AE--S+W CONTROL--026971  
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
WASHINGTON D.C. 20555, (08 /PAGE -- MINIMUM CHARGE \$2.00)  
ABSTRACT DATE OF EVENT - 072479, POWER LEVEL - 000%, CAUSE - MANUAL  
START RELAY MALFUNCTION. DURING A SURVEILLANCE TEST, NO. 1  
DIESEL GENERATOR OUTPUT BREAKER FAILED TO CLOSE WHEN THE  
CONTROL SWITCH WAS ACTUATED. IN ADDITION, AN ALARM WAS  
RECEIVED INDICATING A FAILURE OF THE NO. 1 AIR START MOTORS TO  
START THE DIESEL GENERATOR. THE DIESEL STARTED ON THE NO. 2  
AIR START MOTORS. THE NO. 2 EMERGENCY DIESEL GENERATOR  
REMAINED OPERABLE. AIR START MOTOR FAILURE RESULTED FROM A  
STICKING PINION ON AIR MOTOR. PINION ASSEMBLY WAS CLEANED,  
EXERCISED, & SATISFACTORILY TESTED. TEST CIRCUIT WHICH WAS

INSTALLED TO MONITOR BREAKER CONTROL CIRCUITRY INDICATED FAILURE OCCURRED IN MANUAL START RELAYS. REPEATED CYCLING OF RELAYS DID NOT PRODUCE ANY FAILURES.  
 COMPONENT CODE CKTBK-CIRCUIT CLOSERS/INTERRUPTERS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277

7

ACCESSION NO. 0020150421  
 TITLE DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BEAVER VALLEY  
 1  
 CORP AUTH DUQUESNE LIGHT CO.  
 DATE 1979  
 TYPE 0  
 MEMO LTR W/LETR 79-009 TO U.S. NRC, REGION 1, JUN 21, 1979, DOCKET 50-334, TYPE--PWR, MFG--WEST, AE--S+W CONTROL--026275  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON D.C. 20555. (08 /PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 032079. POWER LEVEL - 000%. CAUSE - NOT DETERMINED. DURING A SURVEILLANCE TEST, #1 DIESEL GENERATOR OUTPUT BREAKER FAILED TO CLOSE WHEN THE CONTROL SWITCH WAS ACTUATED. THE TEST CIRCUIT INSTALLED TO MONITOR BREAKER CONTROL CIRCUITRY WAS OBSERVED, BUT DUE TO AN INCOMPLETE UNDERSTANDING BY THE OPERATOR, NOT ALL OF THE STATUS LIGHT CONDITIONS WERE REPORTED. THE SURVEILLANCE TEST WAS SUCCESSFULLY COMPLETED AT 1400 HOURS. CAUSE OF INOPERABLE BREAKER IS UNKNOWN. BREAKER TEST PANEL REMAINS INSTALLED TO MONITOR THE BREAKER CLOSING CONTACTS. THE OPERATORS HAVE RECEIVED MORE DETAILED INSTRUCTIONS IN USE & INTERPRETATION OF TEST CIRCUIT.  
 COMPONENT CODE CKTBK-CIRCUIT CLOSERS/INTERRUPTERS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277

6

ACCESSION NO. 0020143559  
 TITLE DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BEAVER VALLEY  
 1  
 CORP AUTH DUQUESNE LIGHT CO., PA  
 DATE 1977  
 TYPE 0  
 MEMO 2 PGS, LTR W/LETR 77-49703L TO U.S. NRC, REGION 1, NOV. 29, 1977, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 060377. POWER LEVEL - 42%. CAUSE - STICKING NFLDA RELAY. THE FOLLOWING INCIDENT WAS DISCOVERED DURING A RECENT MANAGEMENT AUDIT, ON 9/23/76, WHILE PERFORMING A SURVEILLANCE TEST ON THE NO. 2 DIESEL GENERATOR, THE OUTPUT BREAKER FAILED TO CLOSE. THE BREAKER FAILED TO CLOSE BECAUSE OF A STICKING NFLDA RELAY IN THE MANUAL OR EXERCISE MODE STARTING CIRCUIT.  
 COMPONENT CODE RELAYX-RELAYS  
 SYSTEM CODE EL-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277

9

ACCESSION NO. 0020140693  
 TITLE DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BEAVER VALLEY  
 1  
 CORP AUTH DUQUESNE LIGHT CO., PITTSBURGH, PA  
 DATE 1978  
 TYPE 0  
 MEMO 4 PGS, LTR W/LETR 78-51701T TO NRC DIRECTOR OF REGULATION, REGION 1, SEPT. 26, 1978, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 091278. POWER LEVEL - 0%. CAUSE - NOT DETERMINED. THE NO. 2 DIESEL GENERATOR WAS OUT OF SERVICE FOR TESTING OF THE DIESEL AIR SYSTEM AND OIL SYSTEM RELIEF VALVES. AT 1107 HOURS DURING SURVEILLANCE TESTING OF THE NO. 1 DIESEL GENERATOR, THE OUTPUT BREAKER FAILED TO CLOSE USING THE CONTROL SWITCH. MAINTENANCE SUPPORT WAS OBTAINED BUT, AT 1128 HOURS, THE BREAKER CLOSED ON THE FIRST ATTEMPT, NEGATING THE



TROUBLESHOOTING EFFORT. A SPECIAL TEST WAS PERFORMED AT 1525 HOURS TO AUTO-LOAD THE NO. 2 DIESEL GENERATOR. THE OUTPUT BREAKER OPERATED PROPERLY DURING THIS TEST.

COMPONENT CODE  
SYSTEM CODE

CKTBRK-CIRCUIT CLOSERS/INTERRUPTERS  
EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 10

ACCESSION NO.  
TITLE

0020140691  
DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BEAVER VALLEY 1

CORP AUTH  
DATE  
TYPE  
MEMO

DUGUESNE LIGHT CO., PITTSBURGH, PA  
1978

AVAIL

3 PGS, LTR W/LER 78-50/01T TO NRC DIRECTOR OF REGULATION, REGION 1, SEPT - 21, 1978, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT

DATE OF EVENT - 090578. POWER LEVEL - 0%. CAUSE - NOT DETERMINED. THE NO. 2 DIESEL GENERATOR WAS OUT OF SERVICE FOR TESTING OF THE DIESEL AIR SYSTEM AND OIL SYSTEM RELIEF VALVES. AT 0115 HOURS DURING SURVEILLANCE TESTING OF THE NO. 1 DIESEL GENERATOR, THE GENERATOR OUTPUT BREAKER FAILED TO CLOSE USING THE CONTROL SWITCH. FINALLY, AFTER CLOSING THE BREAKER MANUALLY (LOCALLY, AT THE BREAKER), THE DIESEL WAS RUN FOR ONE HOUR AT FULL LOAD. THEN, AT 0530 HOURS, THE DIESEL GENERATOR WAS SYNCHRONIZED THREE TIMES SUCCESSFULLY USING THE CONTROL SWITCH. A SPECIAL TEST WAS PERFORMED AT 2200 HOURS TO AUTO-LOAD THE NO. 1 DIESEL GENERATOR. THE OUTPUT BREAKER OPERATED PROPERLY DURING THIS TEST.

COMPONENT CODE  
SYSTEM CODE

CKTBRK-CIRCUIT CLOSERS/INTERRUPTERS  
EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 11

ACCESSION NO.  
TITLE

0020140335  
ELECTRICAL FAULT OCCURS IN STATION MAIN TRANSFORMER AT BEAVER VALLEY 1

CORP AUTH  
DATE  
TYPE  
MEMO

DUGUESNE LIGHT CO., PITTSBURGH, PA  
1978

AVAIL

7 PGS, LTR W/LER 78-43/01T-0 TO U.S. NRC, REGION 1, AUG. 11, 1978, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT

DATE OF EVENT - 072878. POWER LEVEL - 100%. CAUSE - FAULT IN ONE PHASE. AN ELECTRICAL FAULT OCCURRED IN THE STATION MAIN TRANSFORMER RESULTING IN A GENERATOR TRIP, TURBINE TRIP, REACTOR TRIP AND SAFETY INJECTION FOLLOWED 4 MINUTES LATER BY LOSS OF OFFSITE POWER. RC PUMPS TRIPPED ON AN UNDERFREQUENCY CONDITION. BOTH EMERGENCY DIESEL GENERATORS STARTED BUT THE 2 DG FIELD FAILED TO AUTOMATICALLY FLASH. THE FIELD WAS LATER MANUALLY FLASHED. THE PLANT WAS PLACED IN A HOT SHUTDOWN CONDITION IN A CONTROLLED MANNER. EVENTS WERE INITIATED BY AN ELECTRICAL FAULT IN ONE PHASE OF THE MAIN TRANSFORMER. LOSS OF OFFSITE POWER RESULTED FROM IMPROPER OPERATION OF THE MAIN GENERATOR OUT OF STEP RELAY. THE 2 DG FIELD FLASH RELAY FAILURE COULD NOT BE DUPLICATED AND HAS SINCE TESTED SATISFACTORILY.

COMPONENT CODE  
SYSTEM CODE

TRANSF-TRANSFORMERS  
EE-AC ONSITE POWER SYS & CONTROLS

1675/0000001-000002277 12

ACCESSION NO.  
TITLE

0020149612  
OIL LEAK FOUND ON DIESEL GENERATOR CONTROL PANEL AT BEAVER VALLEY 1

CORP AUTH  
DATE  
TYPE  
MEMO

DUGUESNE LIGHT CO., PITTSBURGH, PA  
1978

AVAIL

4 PGS, LTR W/LER 78-037/01T TO NRC DIRECTOR OF REGULATION, REGION 1, JUNE 14, 1978, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,

WASHINGTON, D. C. 20555 (06 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT DATE OF EVENT - 000178. POWER LEVEL - 0%. CAUSE - PRESSURE GAGE INSTALLED IMPROPERLY. ON 5/21/78, WITH THE PLANT IN OPERATIONAL MODE 5, THE LUBE OIL PRESSURE GAGE ON THE NO. 2 DIESEL GENERATOR WAS CALIBRATED AND THE GENERATOR WAS RETURNED TO SERVICE. ON 6/1/78, DURING THE MONTHLY SURVEILLANCE TEST, AN OIL LEAK WAS DISCOVERED IN THE ENGINE CONTROL PANEL AND THE GENERATOR WAS SHUT DOWN AND DECLARED INOPERABLE. THE LEAK RESULTED FROM A LOOSE SWAGELUCK CONNECTION ON THE LUBE OIL PRESSURE GAGE WHICH APPARENTLY WAS NOT PROPERLY REINSTALLED AFTER CALIBRATION ON 5/21/78. THE LINE WAS REPAIRED AND THE DIESEL RETURNED TO SERVICE.

COMPONENT CODE INSTRU-INSTRUMENTATION AND CONTROLS  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 13  
ACCESSION NO. 0020138349  
TITLE LEAK FOUND IN DIESEL FUEL OIL PUMP DISCHARGE PIPING AT BEAVER VALLEY 1  
CORP AUTH DUCUESNE LIGHT CO., PITTSBURGH, PA  
DATE 1978  
TYPE 0  
MEMO 3 PGS, LTR W/LER 78-22703L TO U.S. NRC, REGION 1, MAY 16, 1978, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (06 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT DATE OF EVENT - 041878. POWER LEVEL - 100%. CAUSE - FLAW IN PIPE NIPPLE. DURING NORMAL OPERATION, THE NO. 1 DIESEL GENERATOR WAS SHUT DOWN AND DECLARED INOPERABLE DUE TO AN OIL LEAK IN THE FUEL OIL PUMP DISCHARGE PIPING. THE INCIDENT WAS CAUSED BY A FLAW IN A FUEL OIL PUMP DISCHARGE PIPING NIPPLE. THE NIPPLE WAS REPLACED AND THE PIPING WAS INSPECTED FOR LEAKS.

COMPONENT CODE PIPEXX-PIPES, FITTINGS  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 14  
ACCESSION NO. 0020134542  
TITLE DIESEL GENERATOR BREAKER FAILS TO CLOSE AT BEAVER VALLEY 1  
CORP AUTH DUCUESNE LIGHT CO., PITTSBURGH, PA  
DATE 1978  
TYPE 0  
MEMO 3 PGS, LTR W/LER 78-004703L TO U.S. NRC, REGION 1, FEB. 7, 1978, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (06 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT DATE OF EVENT - 011178. POWER LEVEL - 100%. CAUSE - NO APPARENT CAUSE. DURING A SURVEILLANCE TEST, DIESEL GENERATOR 2 OUTPUT BREAKER FAILED TO CLOSE. THE BREAKER WAS COMPLETELY INSPECTED, BUT NO CAUSE FOR FAILURE COULD BE DETERMINED. IT WAS CYCLED SEVERAL TIMES IN THE TEST POSITION AND THE TEST WAS THEN SATISFACTORILY PERFORMED.

COMPONENT CODE CKTRK-CIRCUIT CLOSERS/INTERRUPTERS  
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 15  
ACCESSION NO. 0020132965  
TITLE REACTOR TAKEN TO POWER OPERATION WITH DIESEL GENERATOR OUT OF SERVICE AT BEAVER VALLEY 1  
CORP AUTH DUCUESNE LIGHT CO., PITTSBURGH, PA  
DATE 1977  
TYPE 0  
MEMO 3 PGS, LTR W/LER 77-50701T TO NRC DIRECTOR OF REGULATION, REGION 1, JUNE 23, 1977, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (06 CENTS/PAGE -- MINIMUM CHARGE \$2.00)

ABSTRACT DATE OF EVENT - 062277. POWER LEVEL - 0%. CAUSE - MISINTERPRETATION OF REG. GUIDE. DURING A MANAGEMENT AUDIT, IT WAS DISCOVERED THAT THE REACTOR WAS TAKEN FROM HOT STANDBY TO POWER OPERATION WITH DIESEL GENERATOR 1 OUT OF SERVICE FOR

PREVENTIVE MAINTENANCE. THE STATION WAS OPERATING WHEN THE DG WAS REMOVED FROM SERVICE. THE REACTOR THEN TRIPPED AND WAS RETURNED TO OPERATING CONDITION. THE STATION STAFF MISINTERPRETED REG. GUIDE 1.16. THE ERROR HAS BEEN RECOGNIZED. ENGINE-ENGINES, INTERNAL COMBUSTION  
 EE-EMERG GENERATOR SYS & CONTROLS

COMPONENT CODE  
 SYSTEM CODE

1675/0000001-000002277 16  
 ACCESSION NO. 0020132581  
 TITLE DIESEL GENERATOR OUTPUT VOLTAGE ZERO AT BEAVER VALLEY 1  
 CORP AUTH DUQUESNE LIGHT CO., PITTSBURGH, PA.  
 DATE 1977  
 TYPE 0  
 MEMO 2 PGS, LTR W/LER 77-69/03L TO NRC DIRECTOR OF REGULATION, REGION 1, AUG. 16, 1977, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 071777. POWER LEVEL. 50%. CAUSE - LOOSE CONNECTION. DURING A 50% NET LOAD TRIP TEST, DIESEL GENERATOR 2 STARTED, WENT TO FULL SPEED AND CLOSED ONTO THE BUS. HOWEVER, THE DIESEL OUTPUT VOLTAGE WAS ZERO AND LOADS ON BUS DF REMAINED DEENERGIZED. THE CAUSE WAS LOOSE CONNECTIONS IN THE AUTOMATIC FIELD FLASH CIRCUIT. THE GENERATOR OPERATED PROPERLY WITH MANUAL FIELD FLASH.  
 COMPONENT CODE CKTBK-CIRCUIT CLOSERS/INTERRUPTERS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 17  
 ACCESSION NO. 0020129436  
 TITLE DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BEAVER VALLEY 1  
 CORP AUTH DUQUESNE LIGHT CO., PITTSBURGH, PA  
 DATE 1977  
 TYPE 0  
 MEMO 2 PGS, LTR W/LER 77-13/03L TO U.S. NRC, REGION 1, APRIL 4, 1977, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 031477. POWER LEVEL - 75%. CAUSE - DIRTY CONTROL SWITCH CONTACTS. DURING A SURVEILLANCE TEST ON DIESEL GENERATOR 2, THE GENERATOR OUTPUT BREAKER FAILED TO CLOSE. FAILURE WAS DUE TO DIRTY CONTACTS ON THE BREAKER CONTROL SWITCH. THE WESTINGHOUSE TYPE UT2 SWITCH WAS CLEANED AND THE CONTACTS WERE ALIGNED. THE DG WAS TESTED AND RETURNED TO OPERABLE STATUS.  
 COMPONENT CODE CKTBK-CIRCUIT CLOSERS/INTERRUPTERS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 18  
 ACCESSION NO. 0020129431  
 TITLE DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BEAVER VALLEY 1  
 CORP AUTH DUQUESNE LIGHT CO., PITTSBURGH, PA  
 DATE 1977  
 TYPE 0  
 MEMO 3 PGS, LTR W/LER 77-29/03L TO U.S. NRC, REGION 1, MAY 11, 1977, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE \$2.00)  
 ABSTRACT DATE OF EVENT - 041177. POWER LEVEL 75%. CAUSE - DIRTY RELAY CONTACTS. DURING A TRAINING STARTUP OF DIESEL GENERATOR 2, THE OUTPUT BREAKER FAILED TO CLOSE. IT FAILED BECAUSE OF DIRTY CONTACTS ON THE NFLDA (NO FIELD) RELAY. AFTER THE CONTACTS WERE CLEANED, THE RELAY OPERATED. DG2 WAS TESTED AND RETURNED TO OPERABLE STATUS.  
 COMPONENT CODE RELAYX-RELAYS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 19

ACCESSION NO. 0020129426  
 TITLE DIESEL GENERATOR OUTPUT BREAKER FAILS TO CLOSE AT BEAVER VALLEY 1  
 CORPAUTH DUQUESNE LIGHT CO., PITTSBURGH, PA  
 DATE 1977  
 TYPE 0  
 MEMO 3 PGS, LTR W/LER 77-34/03L TO U.S. NRC, REGION I, MAY 20, 1977;  
 DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
 WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE  
 \$2.00)  
 ABSTRACT DATE OF EVENT - 042677. POWER LEVEL - 100%. CAUSE - DIRTY  
 RELAY CONTACTS. DURING A TEST OF DIESEL GENERATOR 1, THE  
 OUTPUT BREAKER FAILED TO CLOSE. FAILURE WAS DUE TO DIRTY  
 CONTACTS ON THE NALDA (NO FIELD) RELAY. AFTER CLEANING THE  
 CONTACTS, THE RELAY OPERATED SATISFACTORILY. A DESIGN CHANGE  
 HAS BEEN REQUESTED TO REPLACE THE PRESENT NFLDA RELAYS WITH  
 IMPROVED SEALED RELAYS.  
 COMPONENT CODE RELAYX-RELAYS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 20

ACCESSION NO. 0020129425  
 TITLE DIESEL GENERATOR FAILS TO START AT BEAVER VALLEY 1  
 CORPAUTH DUQUESNE LIGHT CO., PITTSBURGH, PA  
 DATE 1977  
 TYPE 0  
 MEMO 2 PGS, LTR W/LER 77-37/03L TO U.S. NRC, REGION I, MAY 20, 1977.  
 DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
 WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE  
 \$2.00)  
 ABSTRACT DATE OF EVENT - 042977. POWER LEVEL - 100%. CAUSE - MOISTURE  
 IN STARTING AIR. AN ATTEMPT WAS MADE TO START DIESEL GENERATOR  
 1 PRIOR TO PERFORMING PREVENTIVE MAINTENANCE ON DG2 OUTPUT  
 BREAKER. DG1 FAILED TO START APPARENTLY BECAUSE OF MOISTURE IN  
 THE STARTING AIR. A DESIGN CHANGE HAS BEEN INITIATED TO  
 INSTALL REFRIGERATED COMPRESSED AIR DRIERS IN THE AIR START  
 SYSTEM.  
 COMPONENT CODE ENGINE-ENGINES, INTERNAL COMBUSTION  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 21

ACCESSION NO. 0020129424  
 TITLE DIESEL GENERATOR OUTPUT BREAKER TRIPS AT BEAVER VALLEY 1  
 CORPAUTH DUQUESNE LIGHT CO., PITTSBURGH, PA  
 DATE 1977  
 TYPE 0  
 MEMO 3 PGS, LTR W/LER 77-29/03L TO U.S. NRC, REGION I, JUNE 15,  
 1977, DOCKET 50-334, TYPE--PWR, MFG--WEST., AE--STONE & WEBSTER  
 AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
 WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE  
 \$2.00)  
 ABSTRACT DATE OF EVENT - 022477. POWER LEVEL - 0%. CAUSE - INTERNAL  
 LOSS OF FIELD TRIP NOT DISCONNECTED. ALL MOTOR LOADS SUPPLIED  
 FROM EMERGENCY 4KV BUSES HAD BEEN SHIFTED TO THE AE BUS IN  
 PREPARATION FOR TESTING THE AUTO-START ON DIESEL GENERATOR 2.  
 DURING A TEST OF THE DG TRIP LOCKOUT FEATURE IN THE EMERGENCY  
 MODE, THE DG OUTPUT BREAKER TRIPPED. THE DG TRIPPED BECAUSE OF  
 AN INTERNAL LOSS OF FIELD TRIP SUPPLIED BY THE VENDOR WHICH HAD  
 NOT BEEN DISCONNECTED DURING ACCEPTANCE TESTING. A DESIGN  
 CHANGE REQUEST WAS INITIATED TO REMOVE THE TRIP.  
 COMPONENT CODE INSTRU-INSTRUMENTATION AND CONTROLS  
 SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

1675/0000001-000002277 22

ACCESSION NO. 0020113494  
 TITLE DIESEL GENERATOR FIELD LOST AT BEAVER VALLEY 1  
 CORPAUTH DUQUESNE LIGHT CO., SHIPPINGPORT, PA  
 DATE 1976  
 TYPE 0  
 MEMO 4 PGS, LTR W/LER 76-15/02L TO NRC DIRECTOR OF REGULATION,  
 REGION I, APRIL 25, 1976, DOCKET 50-334, TYPE--PWR, MFG--WEST.,  
 AE--STONE & WEBSTER

AVAIL

AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET,  
WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE  
\$2.00)

ABSTRACT

CAUSE - HIGH RESISTANCE CONNECTION. DIESEL GENERATOR 1 DC  
FIELD WAS LOST DURING TESTING RESULTING IN LOSS OF BUS 1AE  
EMERGENCY EQUIPMENT. A HIGH RESISTANCE WIRING CONNECTION IN  
THE DC EXCITER BREAKER CAUSED OVERHEATING AND MELTING OF THE  
WIRING. HEAT CAUSED THE BREAKER TO TRIP. THE BREAKER WAS  
REPLACED AND A NEW CONNECTION MADE UP.