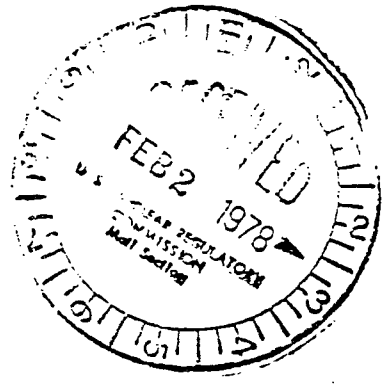
Enclosure 3

NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401



January 26, 1978

Director of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR 22

Questionnaire on Diesel Generators

In response to your request of December 15, 1977, one completed copy of the questionnaire is attached.

L O Mayer, PE
Manager of Nuclear Support Services

LOM/LLT/deh

cc: J G Keppler
G Charnoff

7803402 13

S. Are any foreign gases such as propane, freon, halon, carbon dioxide, etc. stored in the: Diesel Engine room? Yes ____ No X or adjacent buildings? Yes X No ____

If yes, (other than hand portable fire extinguishers), then identify gases and give approximate tank size.

Gases	Volume (ft^3)	
H_2	2430	(Used in main generator for stator cooling)
N_2	UN	
Cl_2 (stored as a liquid)	(8000 lb)	

T. Does control system automatically bypass, in emergency starting, any engine temporarily out of service for maintenance? Yes ____ No X

If yes, then how many failures to bypass have occured?
NA

U. Does the control system automatically override the test mode under emergency conditions? Yes ____ No X

V. Have repetitive mechanical failures occurred in any component part or subsystem of the engine, generator, or switch gear, etc.? Yes X No ____

If yes, then which part or subsystem? Air start air relaying valves and Motors

How many failures? Eight

Give nature of failure. Dirt and rust particles in airlines. Faulty air start motor, stuck relay valve, loose fitting on airline, sludge in airline lubricator.

W. Would periodic (yearly or other) evaluation and/or testing by "outside experts" contribute significantly to the diesel-generator reliability? Yes X No ____

Give brief reasons for the answer. Factory recommended service personnel are brought in during refueling outages on preventive maintenance program.

X. 1. Give the accumulated time-load operating record for each diesel-generator unit from installation to the present (Running Hours):

Preoperational test Date 7-10-70 (Completed)

Engine Serial No.	Surv. Testing & Maintenance Hrs. No Load	Loaded	Emergency and Other Service Hrs.	Total Hours
1311	60*	312	0	372*
1312	60*	312	0	372*

* Estimated (Time meter records only when Generator field is energized)

2. Surveillance test load (percent of continuous rating) 100%

3. Give the projected or planned time-load operation for each diesel-generator unit during the next 12 months.

Surveillance & Maintenance Hrs.		Emergency and other Service Hrs.	Total Hours	
1311	16	0	16	
1311	16	0	16	

4. Provide the following summary of the periodic surveillance testing experience:

a. Starting date of surveillance testing (OL date) 7-71
b. Periodic test interval Monthly, Cyclic
c. Total number of surveillance tests performed ~ 200
d. Total number of test failures 10

failure to start 9* failure to accept load 1**
failure to carry load 0 failures due to operator error 0
failure due to equipment not being operative during emergency conditions 0

e. Supply a copy of the surveillance test procedures with this completed questionnaire.

* Includes backup starting system being found inop after primary system has started diesel

** Overspeed trip

Plant Name _____
Unit No. _____

TABLE 1

Diesel Generator Operations Data
Calendar Year 19__

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 Failure (Refer to attached LERs or Table. 3)
Tech. Spec Req'd Test						
DG Actual Demand Starts not for Testing						
Miscellaneous Tests (Specify Type)						

TABLE 2

Diesel Generator Scheduled Downtime Record
Calendar Year 19__

Plant Name _____
Unit No. _____

Reason for Downtime	Hours of Downtime										Comments
	Reactor shutdown					Reactor not shutdown					
	DG#	DG#	DG#	DG#	DG#	DG#	DG#	DG#	DG#	DG#	
Scheduled Maintenance											
Time DG is unavailable for emergency service because of required tests											

TABLE 3

Diesel Generator Unscheduled Downtime Record
Calendar Year 19__

Plant Name _____
Unit No. _____

LER Abstract No. (Refer to attched 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

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.

Plant Name xxx
Unit No. 1 & 2

TABLE 1
(Sample)

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	12	2	100	30 min; 0 min	LER # 1 & 4
(1 hour)	2	12	0	100	--	
(1 start/test)	3	12	1	100	0 min	LER #2
Refueling Outage	1	1	0	100	--	
	2	1	0	100	--	
(12 hours)	3	1	1	100	1 hour	LER # 3
(1 start/test)						
Misc. Tech Spec	1	2	0	100	--	Table 3 No. 9
Req'd Tests	2	4	0	100	--	
(Start Only)	3	2	0	100	--	
(1 start/test)						
DG Actual Demand Starts not for Testing						
SIAS Signal	1	1	0	0	--	LER # 8 Multiple start of 3 DGs
	2	1	0	0	--	" "
(1 hour)	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__

Plant Name _____
Unit No. _____

Reason for Downtime	Hours of Downtime										Comments
	Reactor shutdown					Reactor not shutdown					
	DG# 1	DG# 2	DG# 3	DG#	DG#	DG# 1	DG# 2	DG# 3	DG#	DG#	
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__

Plant Name XXX
Unit No. 1&2

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

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.

ACCESSION NO. 00Z0156053
TITLE DIESEL GENERATOR FAILS TO ACCEPT RATED LOAD AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO.
DATE 1980
TYPE Q
MEMO LTR W/LER 80-007 TO U.S. NRC, REGION 3, MAR 19, 1980, DOCKET 50-282, TYPE--PWR, MFG--WEST, AE--PIONEER
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 021880. POWER LEVEL - 100%. CAUSE - NONLICENSED OPERATOR ERROR. DURING SURVEILLANCE TEST, THE LOAD ON D1 DIESEL GENERATOR COULD NOT BE INCREASED ABOVE 1400KW (FULL LOAD CAPABILITY IS 2750KW). THE GOVERNOR LOAD LIMIT SETPOINT WAS FOUND SET WELL BELOW THE DESIRED SETTING. THE SETPOINT WAS RETURNED TO NORMAL AND THE TEST COMPLETED SATISFACTORILY. THE LOAD LIMIT SETPOINT FOR D2 DIESEL GENERATOR WAS FOUND NOT AT THE NORMAL SETTING BUT THIS DID NOT AFFECT OPERABILITY OF D2. DURING THE PREVIOUS SURVEILLANCE TEST TWO WEEKS EARLIER AN OPERATOR, WHO WAS IN TRAINING, CHANGED THE LOAD LIMIT SETTINGS WITHOUT REALIZING THE SIGNIFICANCE OF HIS ACTIONS. THIS EVENT WAS DISCUSSED WITH INDIVIDUAL PERSONNEL. THE SURVEILLANCE PROCEDURE WAS CHANGED TO REQUIRE A CHECK OF LOAD LIMIT SETPOINT UPON COMPLETION OF THE TEST.
COMPONENT CODE ENGINE-ENGINES,INTERNAL COMBUSTION
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-00000014// 2
ACCESSION NO. 00Z0154910
TITLE DIESEL GENERATOR LOCKED OUT BY OIL PRESSURE SWITCH AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO.
DATE 1980
TYPE Q
MEMO LTR W/LER 80-005 TO U.S. NRC, REGION 3, FEB 20, 1980, DOCKET 50-282, TYPE--PWR, MFG--WEST, AE--PIONEER
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 012180. POWER LEVEL - 100%. CAUSE - ABNORMALLY COLD ROOM. DURING SURVEILLANCE TEST OF D1 DIESEL GENERATOR, A LOCKOUT OCCURRED WHILE THE ENGINE WAS BEING PRELUBED. D1 WAS INOPERABLE ABOUT 6 MINUTES. NOT REPETITIVE. SINCE D2 DIESEL GENERATOR HAD BEEN RUNNING CONTINUOUSLY AS A RESULT OF RO 79-32, THE D1 DIESEL GENERATOR ROOM WAS ABNORMALLY COOL; VENTILATION AIR SUPPLY IS SHARED. LUBE OIL PRESSURE UNDER THESE CONDITIONS REACHED 6 PSIG AND SHUTDOWN CIRCUITRY SAW THIS AS AN ABORTED START ATTEMPT AND ACTUATED THE SHUTDOWN RELAY AND THE 86 LOCKOUT. A CAUTION WILL BE ADDED TO THE PROCEDURE TO MONITOR LUBE OIL PRESSURE. PRELUBE IS NOT DONE FOR AN AUTOMATIC START, SO EXCEPT FOR THE 6 MINUTES OF INOPERABILITY THE UNIT WOULD HAVE STARTED ATOMATICALLY AS REQUIRED. D2 IS NO LONGER RUNNING CONTINUOUSLY AND THE SYSTEM IS IN A NORMAL CONFIGURATION.
COMPONENT CODE ENGINE-ENGINES,INTERNAL COMBUSTION
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-00000014// 3
ACCESSION NO. 00Z0154705
TITLE DIESEL GENERATOR RELAY FAILS TO OPERATE AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1980
TYPE Q
MEMO 2 PGS, LTR W/LER 80-2 TO NRC OFFICE OF I & E, REGION III, FEB. 6, 1980, DOCKET 50-282, TYPE--PWR, MFG--WEST, AE--PIONEER
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 010780. POWER LEVEL - 100%. CAUSE - PLUNGER STUCK. DURING SURVEILLANCE TEST OF D1 DIESEL GENERATOR, A RELAY MISOPERATION OCCURRED WHICH WOULD HAVE PREVENTED AUTOMATIC SYNCHRONIZATION OF THE GENERATOR ONTO BUS 15. MANUAL SYNCHRONIZATION WAS AVAILABLE. REDUNDANT POWER SUPPLIES WERE

ALL OPERABLE. NOT REPETITIVE. RELAY PLUNGER STUCK. PLUNGER WAS FREED AND TESTED SATISFACTORILY SEVERAL TIMES. SEARCH IS BEING MADE FOR A MORE RELIABLE REPLACEMENT RELAY.
COMPONENT CODE RELAYX-RELAYS
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-0000014// 4
ACCESSION NO. 00Z0154703
TITLE DIESEL GENERATOR TRIPS DURING TESTING AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1980
TYPE Q
MEMO 2 PGS, LTR W/LER 80-6 TO NRC OFFICE OF I & E, REGION III, FEB. 6, 1980, DOCKET 50-282, TYPE--PWR, MFG--WEST, AE--PIONEER
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE — MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 012380. POWER LEVEL - 100%. CAUSE - DEFECTIVE GOVERNOR SYNCHRONIZING MOTOR. DURING OPERABILITY TESTING OF D2 DIESEL GENERATOR, THE ABILITY TO REDUCE GENERATOR LOAD FROM THE CONTROL ROOM WAS LOST. WITH THE GENERATOR AT 3000 KW, A CRANKCASE EDUCTOR SUPPLY HOSE CAME LOOSE AND THE MACHINE TRIPPED ON HIGH CRANKCASE PRESSURE. DURING OPERABILITY TESTING OF OTHER SAFEGUARDS EQUIPMENT, A JACKET COOLANT HOSE ON NO. 12 DIESEL COOLING WATER PUMP RUPTURED. A POWER REDUCTION WAS STARTED. UNIT 2 WAS IN REFUELING SHUTDOWN. D1 DIESEL GENERATOR AND NO. 22 DIESEL COOLING WATER PUMP WERE OPERABLE THROUGHOUT THE PERIOD. LOSS OF LOAD CONTROL WAS CAUSED BY LOOSE FRONT END SHIELD ON GOVERNOR SYNCHRONIZING MOTOR; MOTOR WAS REPLACED. GENERATOR TRIP WAS CAUSED BY LOSS OF EDUCTOR SUPPLY HOSE; HOSE WAS TIGHTLY REINSTALLED. PUMP JACKET COOLANT HOSE WAS REPLACED. INSPECTION OF GENERATOR ITEMS WILL BE ADDED TO PREVENTIVE MAINTENANCE PROGRAM. PUMP HOSES ARE BEING REPLACED.
COMPONENT CODE MOTORX-MOTORS
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-0000014// 5
ACCESSION NO. 00Z0153[illegible]
TITLE DIESEL GENERATOR TRIPS ON HIGH CRANK CASE PRESSURE AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1980
TYPE Q
MEMO 2 PGS, LTR W/LER 79-032 TO NRC OFFICE OF I & E, REGION III, JAN. 16, 1980, DOCKET 50-282, TYPE--PWR, MFG--WEST, AE--PIONEER
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 122179. POWER LEVEL - 100%. CAUSE - WATER LEAK INTO LUBE OIL SYSTEM. DURING SURVEILLANCE TEST, D2 DIESEL GENERATOR TRIPPED ON HIGH CRANKCASE PRESSURE. SEVERAL DAYS OF TROUBLESHOOTING SHOWED THAT THE DIESEL GENERATOR IS OPERABLE IF KEPT HOT. THE DIESEL IS RUNNING LOADED CONTINUOUSLY UNTIL REPAIRS CAN BE MADE. REDUNDANT DIESEL GENERATOR WAS OPERABLE. NOT REPETITIVE. IT APPEARS THAT COOLING WATER LEAKS INTO THE LUBE OIL SYSTEM AND ACCUMULATES DURING SHUTDOWN PERIODS. THE DIESEL GENERATOR IS RUNNING AND IS OPERABLE. FURTHER INVESTIGATIONS WILL BE DONE AND AN UPDATE REPORT ISSUED.
COMPONENT CODE ENGINE-ENGINES,INTERNAL COMBUSTION
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-0000014// 6
ACCESSION NO. 00Z0146757
TITLE FUEL OIL SAMPLE NOT ANALYZED IN DECEMBER AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO.
DATE 1979
TYPE Q
MEMO LTR W/LER 79-005 TO U.S. NRC, REGION 3, APR 12, 1979. DOCKET 50-282, TYPE--PWR, MFG--WEST, AE--PSE CONTROL--025566
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON D.C. 20555. (08 /PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 051579. POWER LEVEL - 100%. CAUSE - DEFECTIVE PROCEDURES. DURING AN AUDIT OF THE SURVEILLANCE PROGRAM, IT WAS.

DISCOVERED THAT A DIESEL GENERATOR FUEL OIL SAMPLE WAS NOT ANALYZED IN DECEMBER 1978. SUBSEQUENT SAMPLES SHOW THAT FUEL OIL WAS ALWAYS IN SPEC. NONREPETITIVE. NO EFFECT ON PUBLIC HEALTH AND SAFETY. TECH SPEC 4.6.A.1.C APPLIES. INADEQUATE PROCEDURE (PROCEDURE WAS NEW AND IN THE DEVELOPMENTAL STAGE). PROCEDURE WAS REVISED.

COMPONENT CODE ZZZZZZ-COMPONENT CODE NOT APPLICABLE
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-00000147/ 7
ACCESSION NO. 00Z0147347
TITLE DIESEL COOLING WATER PUMP FAILS TO START AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO.
DATE 1979
TYPE Q
MEMO LTR W/LER 79-002 TO U.S. NRC, REGION 3, FEB. 23, 1979, DOCKET 50-282, TYPE--PWR, MFG--WEST., AE--PSE CONTROL 028241
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON D.C. 20555, (08 /PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 012679. POWER LEVEL - 100%. CAUSE - STUCK SWITCH CONTACTS. DURING SURVEILLANCE TEST, NO. 22 DIESEL COOLING WATER PUMP FAILED TO START. REDUNDANT EQUIPMENT WAS OPERABLE. PUMP WAS AGAIN MADE OPERABLE IN LESS THAN 14 HOURS. THE CAUSE WAS A STUCK CONTACTS IN A LICON MICRO-SWITCH #11-104 (SPEED SWITCH). SWITCH WAS REPLACED. NO FURTHER ACTION IS NECESSARY SINCE THE PRESENT PREVENTIVE MAINTENANCE PROGRAM ON THIS DEVICE IS CONSIDERED ADEQUATE.
COMPONENT CODE INSTRU-INSTRUMENTATION AND CONTROLS
SYSTEM CODE WA-STATION SERV WATER SYS & CONT

45/5/0000001-00000147/ 8
ACCESSION NO. 00Z0139826
TITLE ROOT VALVE ON DIESEL OIL DAY TANK LEVEL INSTRUMENT CLOSED AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1978
TYPE Q
MEMO 2 PGS, LTR W/LER 78-014/01T-0 TO NRC OFFICE OF I & E, REGION III, JULY 6, 1978, DOCKET 50-282, TYPE--PWR, MFG--WEST., AE--PIONEER SERV.
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20555 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 062278. POWER LEVE - 100%. CAUSE - LEFT CLOSED AFTER PRIOR TEST. ON JUNE 22, 1978, WITH D2 EMERGENCY DIESEL GENERATOR OUT OF SERVICE FOR ANNUAL INSPECTION, AN OPERATOR FOUND THE ROOT VALVE ON D1 DIESEL OIL DAY TANK INSTRUMENT LEVEL COLUMN CLOSED. WHILE THIS CLOSED VALVE WOULD NOT HAVE AFFECTED THE AUTOMATIC STARTING AND OPERATION OF D1 DIESEL GENERATOR, MANUAL ACTION WOULD HAVE BEEN REQUIRED TO REFILL THE DAY TANK FROM THE OIL STORAGE TANKS. THE CLOSED VALVE WAS IMMEDIATELY OPENED. LEVEL COLUMN ROOT VALVES ON ALL SAFEGUARDS DAY TANKS HAVE NOW BEEN LOCKWIRED OPEN. THE MISVALVING OPERATION PROBABLY OCCURRED JUNE 9TH DURING FUEL OIL TRANSFER PUMP TESTING.
COMPONENT CODE VALVEX-VALVES
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-00000147/ 9
ACCESSION NO. 00Z0132942
TITLE BOTH DIESEL GENERATORS INOPERABLE AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1977
TYPE Q
MEMO 3 PGS, LTR W/P-50-77-42 TO NRC OFFICE OF I & E, REGION III, DEC. 22, 1977, DOCKET 50-282, TYPE--PWR, MFG--WEST., AE--PIONEER SERV.
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 120977. POWER LEVEL - 100%. CAUSE - PERSONNEL ERROR. DURING A TEST ON THE WHITE INSTRUMENT CHANNEL, CONTROL ROOM APPROVAL WAS GIVEN FOR REMOVAL OF INVERTER 22 (WHICH FEEDS THE RED INSTRUMENT BUS) FOR MODIFICATION. WHEN THE RED

INSTRUMENT BUS WAS SWITCHED TO ITS ALTERNATE SOURCE, SI WAS INITIATED. THE OPERATOR FAILED TO RESET THE MCA RELAYS (SI START RELAYS) PRIOR TO STOPPING THE DIESEL GENERATORS. THIS RESULTED IN START FAILURES FOR BOTH DIESELS. THE DG'S WERE INOPERABLE FOR ABOUT 10 MINUTES.
COMPONENT CODE GENERA-GENERATORS
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-00000014// 10
ACCESSION NO. 00Z0126611
TITLE DIESEL GENERATOR FAILS TO RESPOND TO LOAD CHANGES AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1977
TYPE Q
MEMO 2 PGS, LTR W/P-RO-77-23 TO NRC OFFICE OF I & E, REGION III, JULY 13, 1977, DOCKET 50-282, TYPE--PWR, MFG--WEST., AE--PIONEER SERV.
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 061777. POWER LEVEL - 100%. CAUSE - LINK LEVER KEY MISSING. DURING A TEST, DIESEL GENERATOR D2 FAILED TO RESPOND TO LOAD CHANGE SIGNALS. A LINK LEVER KEY WAS FOUND TO BE MISSING AND THE LINK LEVEL CAPSCREWS WERE LOOSE. THE KEY WAS REPLACED AND PEENED INTO POSITION AND THE CAPSCREWS TIGHTENED AND LOCKWIRED.
COMPONENT CODE ENGINE-ENGINES,INTERNAL COMBUSTION
SYSTEM CODE EE-EMERG GENERATOR SYS & CONTROLS

45/5/0000001-00000014// 11
ACCESSION NO. 00Z0123156
TITLE DIESEL COOLING WATER PUMP INOPERABLE AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1977
TYPE Q
MEMO 2 PGS, LTR W/P-RO-77-6 TO NRC OFFICE OF I & E, REGION III, MARCH 29, 1977, DOCKET 50-282, TYPE--PWR, MFG--WEST., AE--PIONEER SERV.
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT DATE OF EVENT - 022577. POWER LEVEL - 100%. CAUSE - SLUGGISH GOVERNOR. DURING A TEST, DIESEL 12 COOLING WATER PUMP TRIPPED ON OVERSPEED. THE GOVERNOR WAS SLUGGISH. A GOVERNOR COMPENSATION ADJUSTMENT WAS MADE TO INCREASE THE RESPONSIVENESS OF THE GOVERNOR. THE PUMP WAS RETESTED SATISFACTORILY.
COMPONENT CODE ENGINE-ENGINES,INTERNAL COMBUSTION
SYSTEM CODE WA-STATION SERV WATER SYS & CONT

45/5/0000001-00000014// 12
ACCESSION NO. 00Z0113190
TITLE DIESEL GENERATOR MOMENTARILY INOPERABLE AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1976
TYPE Q
MEMO 2 PGS, LTR W/P-RO-76-16 TO NRC OFFICE OF I & E, REGION III, APRIL 29, 1976, DOCKET 50-306, TYPE--PWR, MFG--WEST., AE--PIONEER SERV.
AVAIL AVAILABILITY - NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, WASHINGTON, D. C. 20545 (08 CENTS/PAGE -- MINIMUM CHARGE $2.00)
ABSTRACT CAUSE - PERSONNEL ERROR. DURING PREVENTIVE MAINTENANCE WITH THE REACTOR AT 100% POWER, A RELAY TECHNICIAN INADVERTENTLY ACTUATED A RELAY WHICH CAUSED DIESEL GENERATOR D1 TO BE MOMENTARILY LOCKED OUT. THE LOCKOUT WAS RESET IMMEDIATELY.

45/5/0000001-00000014// 13
ACCESSION NO. 00Z0110301
TITLE AIR SUPPLY DAMPER TO DIESEL GENERATOR ROOM INOPERABLE AT PRAIRIE ISLAND 1
CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN
DATE 1976
TYPE Q

MEMO 2 PGS, LTR W/P-RO-76-2 TO NRC DIVISION OF OPERATING REACTORS, JAN. 19, 1976, DOCKET 50-282, TYPE--PWR, MFG--WEST., AE--PIONEER SERVICE

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

ABSTRACT CAUSE - ICE BUILDUP ON PARTS. DURING A TEST WITH THE REACTOR AT 100% POWER, THE OUTSIDE AIR SUPPLY DAMPER TO THE DIESEL GENERATOR ROOMS FAILED TO OPEN FULLY. THE DG TEST WAS COMPLETED SATISFACTORILY EVEN THOUGH THE DAMPER WAS NOT FULLY OPEN. ICE HAD BUILT UP ON PARTS OF THE DAMPER. WHEN THE ICE WAS REMOVED, THE DAMPER OPERATED NORMALLY.

45/5/0000001-0000014// 14

ACCESSION NO. 00Z0109651

TITLE DIESEL GENERATOR BEARING FAILS AT PRAIRIE ISLAND 1

CORPAUTH NORTHERN STATES POWER CO., MINNEAPOLIS, MN.

DATE 1976

TYPE Q

MEMO 5 PAGES, LETTER WITH AO 75-39 TO NRC DIVISION OF OPERATING REACTORS, JAN. 16, 1976, DOCKET 50-282, TYPE--PWR, MFG--WEST., AE--PIONEER SERVICE

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

ABSTRACT CAUSE - OIL STARVATION OF BEARING. DURING A TEST WHILE BOTH REACTORS WERE OPERATING AT 100% POWER, DIESEL GENERATOR D2 WAS TRIPPED MANUALLY DUE TO FAILURE OF THE GENERATOR BEARING. THE OIL SPECIFIED IN THE DG TECHNICAL MANUAL WAS INCORRECT. ALSO, THE VENDOR'S MARKING ON OIL SIGHT GLASSES WERE FOUND TO BE IN ERROR, RESULTING IN OIL STARVATION OF THE BEARING. THE OIL IN BOTH DIESEL GENERATORS WAS REPLACED WITH OIL HAVING THE PROPER VISCOSITY. OBVIOUS MARKINGS WERE PLACED AT THE SIGHT GLASS TO INDICATE NORMAL RUNNING SHUTDOWN LEVELS. THE SIGHT GLASS WAS PROPERLY MARKED IN THE OTHER GENERATOR.