07-191-91

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION

UNIT II OPERATIONS

02-REQ-001-264-2-01 Revision 5

TITLE: STANDBY DIESEL GENERATOR

	SIGNATURE	DATE
PREPARER		4/10/90
TRAINING SUPPORT SUPERVISOR	for JAL	4-10-90
TRAINING AREA SUPERVISOR		4/25/90
PLANT SUPERVISOR/ USER GROUP SUPERVISOR	for HTC	5-3-90

Summary of Pages

(Effective Date: 5/17/90)

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Date	Pages
April 1990	1 - 20

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ATTACHMENT 5
LESSON PLAN TEMPORARY/PUBLICATION/ADDENDUM CHANGE FORM

The attached change was made to:

Lesson plan title: Standby Diesel Generator

Lesson plan number: 00-REQ-001-264-2-01

Name of instructor initiating change: P. Walsh

Reason for the change: Incorporate SOER 83-01 into lesson plan. Sect I.G.8 pg 2, Sect II pg 19.

Type of change:

1. Temporary change ____
2. Publication change X
3. Addendum change ____

Disposition:

X 1. Incorporate this change during the next scheduled revision.

____ 2. Begin revising the lesson plan immediately. Supervisor initiate the process.

____ 3. To be used one time only.

Approvals:

Instructor: [signature] /Date 7/30/91

Supervisor Operations Training (or designee): [signature] for J. Reed /Date 7/30/91

I. TRAINING DESCRIPTION

A. Title of Lesson: Standby Diesel Generators and Auxiliaries

B. Lesson Description:

Provide a system review of the Standby Diesel Generator System for Licensed Operators.

C. Estimate of the Duration of the Lesson: 3 Hours

D. Method of Evaluation, Grade Format, and Standard of Evaluation:

Open reference written examination. 80% minimum passing grade.

E. Method and Setting of Instruction:

1. Classroom Lecture and/or
2. Assign the Student Learning Objectives as review problems with the students obtaining answers from the text, writing them down and handing them in for grading.

F. Prerequisites:

1. Instructor:
   a. Demonstrated knowledge and skills in the subject, at/or above the level to be achieved by the trainees, as evidenced by previous training or education, or
   b. SRO license for Nine Mile Point Unit Two or a similar plant, or successful completion of SRO training, including Simulator certification at the SRO level for Nine Mile Point Unit Two.
   c. Qualified in instructional skills as certified by the Training Analyst Supervisor.
2. Trainee:
   a. Meet eligibility requirements per 10CFR55, or
   b. Be recommended for this training by the Operations Superintendent, his designee or Training Superintendent.

G. References:

1. Technical Specifications

   3/4.8.1.1 A.C. Sources-Operating
   3/4.8.1.2 A.C. Sources-Shutdown
   3/4.8.2.1 D.C. Sources-Operating
   3/4.8.2.2 D.C. Sources-Shutdown
   3/4.8.3.1 Distribution-Operating
   3/4.8.3.2 Distribution-Shutdown
   3/4.8 Electrical Power System-Bases

2. Procedures

a. N2-OP-100A Standby Diesel Generators, Rev. 1

3. FSAR

Sect. 8.3

Sect. 9.4

Sect. 9.5

4. Engine Technical Manual E031A

Cooper Bessemer Energy Services

5. ESK 5ENS21

6. ESK 5EGP01

7. Mfr. Drawing G5-553-133 Cooper Energy Systems

8. SOER 83-01 "Diesel Generator Failures" |5

II. REQUIREMENTS |

A. Requirements for Class:

1. AP-9.0, Rev. 2, "Administration of Training"

2. NTP-11, Rev. 5, "Licensed Operator Retraining and Continuing Training"

III. TRAINING MATERIALS

A. Instructor Materials:

1. Transparency Package

2. Overhead Projector

3. Whiteboard and Felt Tip Markers

4. Lesson Plan

5. N2-OLT-18

6. N2-OP-100B

7. T/S 3/4.8 Electrical Power System

8. ESK 5ENS21

9. ESK 5EGP01

10. Mfr. Drawing G5-553-133 Cooper Energy Systems

B. Trainee Materials:

1. N2-OLT-18

2. N2-OP-100B

3. T/S 3/4.8 Electrical Power Systems

IV. EXAM AND MASTER ANSWER KEYS

Will be on file with requal cycle records.

V. LEARNING OBJECTIVES

A. Terminal Objectives

TO-1.0 Perform the actions required for a loss of offsite power. (2000350501)

TO-2.0 Line up the Diesel Generator Auxiliary Systems. (2640010101)

TO-3.0 Start a diesel generator locally. (2640020101)

TO-4.0 Load the diesel generator. (2640030101)

TO-5.0 Monitor the diesel generator. (2640040101)

TO-6.0 Add fuel oil to the diesel generator storage tanks. (2640070101)

TO-7.0 Place the diesel generator in the standby mode. (2649010101)

TO-8.0 Perform the auto start response checks for the diesel generator. (2649050101)

TO-9.0 Perform an emergency stop of the diesel generator while in test mode. (2649080401)

TO-10.0 Perform the DG Operability Test. (2649180201)

TO-11.0 Start and load a DG locally. (2649260401)

TO-12.0 Direct actions required for a loss of electrical power (SRO Only). (3449150503)

B. Enabling Objectives

EO-1.0 State the purposes of the Standby Diesel Generator and Auxiliaries.

EO-2.0 State the type of engine and generator ratings for the Standby Diesel Generators.

EO-3.0 State the parameters and setpoints which will cause the DG to start, trip, and alarm during following conditions:

a. Test
b. LOCA
c. LOOP (Loss of off-site power)

EO-4.0 Briefly describe the purpose of the following Diesel Generator Subsystems:

a. DG Fuel Oil System
b. DG Jacket Water System
c. DG Starting Air System
d. DG Engine Control System
e. DG Lube Oil System
f. DG Combustion Air Intake and Exhaust System

EO-5.0 Given a diagram of the listed systems trace normal flowpaths.

a. DG Fuel Oil System
b. DG Jacket Water System
c. DG Starting Air System
d. DG Engine Control System
e. DG Lube Oil System
f. DG Combustion Air Intake and Exhaust System

EO-6.0 State the bases for the sizing of the fuel oil tanks and air receiver tanks.

EO-7.0 Describe the modes of DG operation for the following conditions:

a. Normal (Standby)
b. Emergency
c. Test

EO-8.0 Describe the DG Control System and engine response to:

a. Engine Trip Signal (Emergency and Non-Emergency Operation.)
b. Loss of control air
c. Loss of governor power

EO-9.0 Given the procedure N2-OP-100A Standby Diesel Generator use the procedure to identify the appropriate actions and/or locate information related to:

a. Startup
b. Normal Operation
c. Shutdown
d. Off Normal Operations
e. Procedures for correcting alarm conditions
f. Precautions and limitations

EO-10.0 SRO ONLY Given Technical Specifications, identify the appropriate actions and/or locate information relating to Limiting Conditions for Operation, Bases and Surveillance Requirements for the Standby Diesel Generator and Auxiliaries system.

LESSON CONTENT	DELIVERY NOTES	OBJECTIVES/ NOTES
I. INTRODUCTION		
A. Greet Class	Complete required paperwork.	
B. Objectives	Review learning objectives with class.	
C. System Purpose		EO-1.0
1. The Standby Diesel Generator System (SDGS) provides on-site power to loads necessary to bring the plant to a safe shutdown condition following a loss of coolant accident (LOCA) and a loss of offsite power (LOOP). The SDGS also provides power to bring the plant to a safe shutdown after an extended loss of off-site power.		
D. General Description		EO-2.0
1. 2EGS*EG1 supplies Div. I 2ENS*SWG101		EO-3.0
2. 2EGS*EG3 supplies Div. II 2ENS*SWG103		
3. DGs maintained in standby status ready to accelerate to rated speed, voltage and frequency within ten seconds of a start signal.		
4. On a LOOP, the DGs pick up loads sequentially following power restoration.	Q: What LOCA indications give the DG a start signal?	
5. On a LOCA, the DGs run unloaded once started.	A: Level 1 or High DW Pressure	

II. DIV I AND II STANDBY DGs

A. 600 rpm, 16 cylinder, 4 stroke turbo charged diesel engine

Note: 6135HP at rated load, compression ratio 11.6 to 1, Wye Wound, 12 pole self-ventilated

B. Ratings

1. Continuous 4,400 KW
2. Two hour rating 4,840 KW

C. Loading Requirements

Q: What condition of loading is the most severe?

A: LOOP followed by a LOCA is the most severe because of the already high load when ECCS Systems start.

Note: Procedure cautions only one service water pump in operation during a LOOP (Ref OP-11)

1. Simultaneous LOOP and LOCA
2. LOCA followed by a LOOP
3. LOCA followed by a LOOP
4. LOOP and Main Generator Trip

III. AUXILIARY SYSTEMS EO-4.0

A. Systems EO-5.0

1. Fuel oil storage and transfer
2. Engine Fuel Oil System
3. Jacket Water Cooling System
4. Starting Air System
5. Lubrication System
6. Combustion air intake and exhaust

B. Fuel Oil and Storage System EO-6.0

1. Purpose - store, filter, and transfer oil in sufficient quantities to allow for seven days continuous operation at engine rated capacity.
2. ~ 55,000 gallon storage tank buried below Diesel Generator Building

Note: $\geq$ 127" on Dip Stick = T/S level requirement of $\geq$ 52,664 gal.

3. Two motor-driven fuel oil transfer pumps are mounted on top of the storage tank.	Show Figure 1 Fuel oil storage and transfer and discuss system flowpaths.
a. Pumps are in parallel and transfer oil to the day tank.	
b. Each pump is capable of supplying the max fuel demand of the engine.	Notes: Rated at 10 gpm, ann. at 7 gpm cycle on day tank level.
4. 660 gal fuel oil day tank located above the generator Control. Room.	T/S require $\geq$ 409 gallons.
a. Provides NPSH for engine driven fuel pump.	
b. Provides enough fuel for about one hour at the two hour load limit.	> 1hr FSAR
C. Fuel Oil Supply System	Show Figure 2 Fuel Oil System and discuss system flowpaths.
1. System consists of:	
a. Engine and motor-driven fuel pumps	
b. Fuel oil cooler	
c. Head tank	
d. Fuel injection pumps	
2. Engine and motor-driven fuel pumps provide 12.5 gpm.	Note: DC motor-driven
3. Motor-driven pump starts on an engine start signal to prime the fuel system.	Note: Engine-driven pump located on left side of engine and is driven off the back of the jacket water pump.
a. Starts at 6# on main fuel header	
b. Auto stops at rated speed	
4. Engine-driven pump delivers fuel oil requirements when at rated speed.	Fuel consumption 5.472 gpm at 4840 kw (FSAR)

5. Fuel oil cooler, cools the fuel oil returned to the day tank.
   a. Located on the front of the engine below the engine-driven lube oil pump.
   b. Cooled by jacket water.
6. Head tank maintains the suction to the injector pumps flooded at all times.
   a. Cap. 5 gal, located on the generator end of the engine, above and between the cylinder banks.
7. Fuel injector pumps are cam operated, positive displacement pumps.
   a. Meter fuel according to engine load.
   b. Deliver high pressure oil to the fuel injection nozzles.

Discharge press min 3500# to open injector

Injector is a needle valve, relief valve that sends the oil to a nozzle to atomize the fuel 10° BTDC

D. Jacket Cooling Water System

Show Figure 3 Jacket Water Cooling System and discuss flow paths

1. Purpose - keeps the engine warm when in standby and cools the engine during operation.
2. Cools the following components:
   a. Cylinder jackets
   b. Combustion air intercoolers
   c. Lube oil cooler
   d. Governor oil cooler
   e. Fuel oil cooler
   f. Turbocharger

Note: Water is chemically treated with sodium nitrate and sodium silicate (give purplish color).

3. 440 gal. standpipe serves as a reservoir and expansion tank.

4. Engine-driven water pump provides 1100 gpm flow through the system when engine is operating.
5. Motor-driven pump circulates warmed water through the engine when in standby.
6. 18 KW heaters maintain temperature 120°F to 130°F.
7. Heater and pump are operated together off of the temperature switch.
8. Thermostatic control valves used to control engine temperature when running.
9. Two-way valve ensures water to all coolers during startup, open less than 165°F.
10. Three-way valve controls flow of jacket water after temperature reaches 165°F.
    a. Three-way valve maintains temp. between 165°F - 175°F.
    b. > 175°F all flow is directed through the coolers.
11. Jacket water coolers are cooled by service water.
12. Combustion air intercooler warms combustion air at startup and cools it when operating.
13. Lube oil governor oil, and fuel oil coolers are also cooled by jacket water.
14. Jacket water flows from main header to each cylinder and also to the turbocharger and heater portion of the combustion air inter-coolers.

Note: Pump Cap. 175 gpm
Div. I - MCC103A
Div. II - MCC303B

Closed > 165°F

E. Starting Air System

1. Purpose - compress and store air for up to five starts without recharging and supplies control air for engine operation.
2. Air compressors are two-stage AC motor-driven that maintain receiver between 240 psig and 250 psig.
3. Air dryers are two automatic regeneration desiccant type air dryers.
4. Two modes
   a. Auto-regenerates based on moisture content.
   b. Fixed - regenerates based on a timer regardless of moisture content.
5. Moisture separator traps any moisture after it leaves the receiver.
6. Starting air solenoids energize to port control air to the starting air control valves provided the turning gear is disengaged.
7. Starting air distributor acts as a timer to open and close the starting air valve in each cylinder head according to the firing order.

Show Figure 4
Air Start System and discuss system flowpaths.

32 cfm each

100# regulator supplies turning gear air

Note: Either set of starting air control valves will crank the engine.

F. Lubrication System

1. Purpose - cool, flush, and lubricate engine components and keeps the engine warm when in standby.

Show Figure 5
Discuss system flowpaths.

LESSON CONTENT	DELIVERY NOTES	OBJECTIVES/ NOTES
2. Motor-driven lube oil circulating pump and heater maintains warm oil circulating through the engine when less than 280 rpm. a. Heater on at 120°F and off at 130°F provided the pump is running.	Pump off when > 280 rpm Pump rated at 120 gpm	
3. Engine-driven pump rated at 530 gpm at 600 rpm.		
4. Three-way temperature control valve maintains oil temp 160°F to 170°F when operating.		
5. Lube oil cooler is cooled by jacket water.		
6. Turbo charger oil variable pressure regulator regulates turbocharger L.O. pressure at 5 psi above turbocharger discharge pressure. a. This prevents forcing oil past the seal and into inlet air stream.	Q: Why is turbocharger lube oil pressure regulated? A: Prevents getting oil into the inlet air stream.	
7. Turbocharger ratio relay senses combustion air inlet pressure and provides a doubled control air pressure signal to the turbocharger oil pressure regulator via the shuttle valve.	Note: Turbocharger oil press regulator maintains oil pressure 5 psi above blower discharge pressure. Min 5#/Max 5# + 2 times the combustion air pressure - this maintains positive press on turbo bearings.	
8. Between the regulator and turbocharger is a post lube valve which will stop oil flow to the turbocharger when the circulating pump is operating after the engine is stopped for 2-3 minutes.		

G. Air Intake and Exhaust System

1. Purpose - supply filtered, warmed air to the turbocharger for engine operation. Also provides a normal and alternate exhaust path.
2. System consists of:
   a. Intake filter
   b. Silencer
   c. Turbocharger
   d. Intercooler-heater
   e. Exhaust silencer
   f. Exhaust relief valve
3. Turbocharger forces air through the intercooler and heater into two air intake manifolds for distribution to the cylinders.
4. Intercooler and heater cool the air that picked up heat in the turbocharger and heats the air when its temperature is below 105°F during startup.
5. Exhaust gases pass from the exhaust manifold to the turbocharger turbine for motive force.

Show Figure 6
DG Air Intake and Exhaust System and discuss system operation.

Turbocharger driven off of exhaust gas from Diesel Engine.

IV. INSTRUMENTATION AND CONTROL

A. P852 Indication

1. Ammeter (0-1000 amps)
2. Frequency (55-65 Hz)
3. Wattsmeter (0-6000 KW)
4. Generator speed

5. Vars (4500-0-4500 KVAR)
6. Exciter field voltmeter (0-120 VDC)
7. Voltmeter (0-5.25 KV)
8. Synchroscope
9. Incoming and running voltmeters (0-5.25 KV)
10. Indicating light show the status of the Fuel Oil and Air Start System.

B. Engine Control System EO-8.0

1. Purpose - provide means for controlling and adjusting engine speed, load, and respond to trip signals.
2. Control governor is an electronic/hydraulic isochronous type.
   a. Controls engine speed by positioning the fuel racks via mechanical linkage.
   b. Controls engine speed after power loss to the electronic governor, then the hydraulic governor will control, this will cause slower engine response and operate at higher speeds.
3. Overspeed governor - centrifugal hydraulic type, setpoint 660 rpm
   a. Causes fuel racks to move to the "no fuel" position by extending the fuel control cylinder.
   b. Shuts butterfly valve on engine air intake.

4. Engine trips - start Air System is control air source.
   a. Trip actuation bleeds air off safety trip valve which moves fuel racks to the no fuel position.
   b. Loss of control air will not shutdown engine, manual quadrant lever will allow you to manually move fuel racks to the no fuel position.
5. Emergency mode - only two trips operable - engine O.S. and generator differential current high - other trips locked out.
   a. Locked out by the solenoid fuel control valves (energized).
   b. Actuation of the safety trip valve has no effect on fuel control cylinder.

   Q: Why disable all but two trips?

   A: Increase generator reliability during an emergency.
6. Eutectic trip mechanisms - melt at setpoint or wear limit. Dump air pressure on safety trip valve good for one trip actuation then must be replaced.

C. P852 Controls

EO-7.0

1. Diesel Generator "Start" Control Switch allows remote starting of diesel generator.
2. Emergency Diesel Generator Output Breaker and Neutral Breaker control switch allows remote breaker operation.

Use 5EGP01 and discuss how the DG output breaker is controlled.

3. Emergency Diesel "Voltage Regulator" Control Switch allows for manual adjustment of DG output voltage.
4. Diesel Generator "Governor" Switch allows for manual adjustment of DG speed.
5. Voltage Regulator Mode Sel Switch
6. Synch. Emerg. Dsl. Gen to Bus Switch provides synchronizing the DG to the emergency bus.

Note: In on defeats LOOP/LOCA start. Use MFR Drawing G5-553-133, Sheet 1, to show why this occurs.

7. Emerg. Diesel Generator LOCA Signal Bypass Switch
   a. On: disable D/G auto start on a LOCA and will prevent ECCS component from starting.
8. Diesel Generator Parallel Switch determines operating mode.
   a. On: Parallel
   b. Off: Isochronous Mode also determined by offsite power breaker.
      1) Closed: Parallel
      2) Isochronous

Q: With the parallel switch in off and the offsite feeder breaker closed what mode would the DG be in if manually started.

A: Parallel

Note: Isochronous means the DG has no speed droop.

V. INTERLOCKS

EO-7/8

A. The Standby Diesel Generator Will Automatically Start On:
   1. Division I LOCA signal
   2. Sustained undervoltage

Use ESK 5ENS21 and MFR Drawing G5-553-133, Sheet 1, to show how DG start signal is applied.

B. Load Shedding	Use ESK 5ENS21 to show how load shedding is accomplished	
1. Trips offsite supply breakers.		
2. Starts Standby Diesel Generation		
3. Permits closure of DG breaker when Diesel Generator is up to rated speed and voltage.		
4. Sheds 4.16 KV loads.		
a. RHS pumps, LPCS pump, SW pumps, SFC pumps, trips stub bus supply breaker.		
5. Starts load sequencing.		
C. The Standby Diesel Trips When Any of the Following Conditions Exist:		
1. Generator overspeed	660 rpm	
2. Generator differential current		
3. High jacket water temperature	> 205°F	
4. Low turbo lube oil pressure	< 4 psig	
5. Low lube oil pressure	< 30 psig	
6. High lube oil temperature	> 185°F	
7. Turbocharger thrust bearing failure		
8. Excessive engine vibration	> 5 g	
9. Main and connecting rod high bearing temperature		
10. Generator pedestal bearing high temperature	Mn-228°F C. Rod 197°F	
11. All mechanical and electrical shutdowns (except engine overspeed and generator differential) are locked out when the SDG is operating in the LOCA mode.	228°F 86-2EGPX01 lockout	

D. Emergency Mode

1. Response to a Loop:
   Diesel generator starts and accelerates to rated speed, voltage and frequency and picks up loads.

   DG output breaker is required to close within 10 seconds.

2. Response to a LOCA
   a. Diesel generator starts on LOCA signal and accelerates to rated speed, voltage, and frequency.
   b. Diesel idles at rated speed voltage and frequency awaiting closure of diesel generator supply breaker in the event of a loss of offsite power.

3. When the emergency bus is manually de-energized, the DG output breaker will not close, but the DG will start.

   Use ESK 5EGP01 to show how this is accomplished.

VI. SYSTEM INTERRELATIONS

A. Generator Ventilation System
   The Normal Ventilation Subsystem provides individual temperature control and ventilation for each of the emergency diesel generator room and associated Control Rooms when the diesels are not running. The Standby Ventilation Subsystem provides cooling to the diesel generator rooms when the diesels are running.

B. Service Water System
   The Service Water System provides cooling water for the diesel generators during operation.

   Discuss SWP interlocks with class.

C. Plant Electrical Distribution

Starting and control power for the diesels in the test mode provided by a nondivisional 125V DC battery. Control power for diesel operation in the emergency mode is supplied from its divisional 125 VDC. The AC power required to support the diesel generators is supplied by the Essential AC Power System.

VII. TECHNICAL SPECIFICATIONS — EO-10.0

Review Tech Spec section 3/4.8 and associated bases and Tech Spec interpretations

VIII. PROCEDURE REVIEW — EO-9.0

A. Review N1-OP-100A Standby Diesel Generator

1. Precautions/Limitations
2. Off-Normal Procedures

Also include any points of the procedure that the class may wish to discuss.

IX. RELATED PLANT EVENTS

A. Discuss Any Recent LER, SERs, etc.

B. Review SOER 83-01 with trainees

Note: Rev any new material discussed to this lesson plan.

X. WRAP-UP

Review Learning Objectives

A. ATTACHMENT 1

NMP2 LERs

1. LER 88-036
2. LER 88-050
3. LER 87-039
4. LER 86-022

B. LIST OF FIGURES

1. Nine Mile Point 2 LER 88-036, Rev. 01

Update on failure of a transfer switch contact to return to normal results in an inoperable diesel generator and a violation of tech specs.

On July 28, 1988 while at approximately rated thermal power, it was discovered that Unit 2 had not been in compliance with its Technical Specifications (TS). From July 21, 1988 to July 28, 1988, the appropriate TS action statements were not performed for continued operation with one diesel generator inoperable. The diesel was inoperable due to its associated cooling water valve being inoperable. Operations personnel were not aware of this situation until performance of a diesel generator surveillance test. The immediate cause was the failure of a contact on a remote shutdown panel transfer switch to return to its normal position. The most probable root cause of this event has been determined to be a programmatic deficiency. A possible contributing cause was an installation deficiency. Immediate corrective actions were to restore the mispositioned contact to its normal position, perform the TS required surveillance test and declare the diesel generator operable. Additional corrective actions consisted of the Electrical Maintenance Department reworking the associated working terminal lugs, as required, to the correct installation configuration and verifying no further impediment to proper switch operation, posting of caution signs on the remote shutdown panels and issuing a Lessons Learned.

2. Nine Mile Point 2 LER 88-050

Engineered safety feature results from opening of a feeder breaker to an emergency switchgear due to personnel error.

On September 20, 1988 at 1438 hours Unit 2 was operating at 63% of rated thermal power when the Division 1 Service Water System's "Loss of Off-Site Power" logic actuated. The Division 1 Diesel Generator (EGL) had been operating in parallel with normal off-site site power to the

Division 1 Emergency Switchgear. At the conclusion of the test, the licensed operator in the control room inadvertently opened the off-site power breaker instead of the EGL output breaker. This resulted in the expected Service Water System (SWP) automatic actions due to the initiation of SWP "Loss of off-site immediate corrective action was to reclose the Division 1 Switchgear normal off-site power breaker and to restore the SWP System to its normal line up. To prevent recurrence, a training modification recommendation has been issued to incorporate the Institute of Nuclear Power Operations "Self Verification Work Practice" in simulator training.

3. Nine Mile Point 2 LER 87-39

Required Surveillance not performed results in T/S violation.

On June 30, 1987 it was discovered that a surveillance required by an LCO had not been performed. The LCO which was exceeded (TS 3.8.1.1) is concerned with the operability of AC electrical power sources and details actions which must be taken when such power sources are inoperable. The LCO was exceeded as the result of removing from service one of the two 50% capacity fans of the Division 2 Diesel Generator room exhaust ventilation system for approximately 16 hours without observing the proper Action Item. Power TS, in some cases, removing all or part of an auxiliary system from service renders that particular system inoperable. Under certain conditions, removing one of the two 50% capacity HVP fans from service renders the Division 2 Diesel Generator inoperable.

4. Nine Mile Point 2 LER 86-022

Division I, II, III Diesel Generators Inoperable.

On December 22, 1986, the three standby diesel generators (DG) at Unit 2 (NMP2) were declared inoperable as a result of simultaneous draining of each DG Day Tank during a Chemistry Surveillance Test. The reactor was at 0% power, with the mode switch in "shutdown". Additionally, plant operations were in compliance with NMP2 Technical Specification, Section 3.8.1.2 Action Statement "A". No transients occurred while the standby DG's were inoperable. Corrective actions taken Chemistry Surveillance Procedure N2-CSP-8 revised. The parties involved have been counseled on event severity and consequences. A letter has been written to the Chemistry Technicians re-enforcing the need to communicate any identified procedural deficiencies to supervision. A letter has been written to operators to ensure adequate assessment of procedure prior to authorization by the control room supervision. As of January 19, 1987 the control room will not allow any surveillance or a maintenance procedures to be run without plant impact statements.