Enclosure 2
ULNRC-1134

MARKED TECHNICAL SPECIFICATION PAGES

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
13. Steam Generator Water Level-Low-Low	S	R	M	N.A.	N.A.	1, 2
14. Undervoltage - Reactor Coolant Pumps	N.A.	R	N.A.	M	N.A.	1
15. Underfrequency - Reactor Coolant Pumps	N.A.	R	N.A.	M	N.A.	1
16. Turbine Trip						
a. Low Fluid Oil Pressure	N.A.	R	N.A.	S/U(1, 10)	N.A.	1
b. Turbine Stop Valve Closure	N.A.	R	N.A.	S/U(1, 10)	N.A.	1
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	R#	N.A.	1, 2
18. Reactor Trip System Interlocks						
a. Intermediate Range Neutron Flux, P-6	N.A.	R(4)	M	N.A.	N.A.	2##
b. Low Power Reactor Trips Block, P-7	N.A.	R(4)	M(8)	N.A.	N.A.	1
c. Power Range Neutron Flux, P-8	N.A.	R(4)	M(8)	N.A.	N.A.	1
d. Power Range Neutron Flux, P-9	N.A.	R(4)	M(8)	N.A.	N.A.	1

REVISION 2

TABLE NOTATIONS

*Only if the Reactor Trip System breakers happen to be closed and the Control Rod Drive System is capable of rod withdrawal.

##Below P-6 (Intermediate Range Neutron Flux interlock) Setpoint.

###Below P-10 (Low Setpoint Power Range Neutron Flux interlock) Setpoint.

(1) If not performed in previous 7 days.

(2) Comparison of calorimetric to excore power indication above 15% of RATED THERMAL POWER. Adjust excore channel gains consistent with calorimetric power if absolute difference is greater than 2%. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.

(3) Single point comparison of incore to excore AXIAL FLUX DIFFERENCE above 15% of RATED THERMAL POWER. Recalibrate if the absolute difference is greater than or equal to 3%. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.

(4) Neutron detectors may be excluded from CHANNEL CALIBRATION.

(5) Detector plateau curves shall be obtained, evaluated and compared to manufacturer's data. For the Intermediate Range and Power Range Neutron Flux channels the provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.

(6) Incore - Excore Calibration, above 75% of RATED THERMAL POWER. The provisions of Specification 4.0.4 are not applicable for entry into MODE 2 or 1.

(7) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(8) With power greater than or equal to the interlock Setpoint the required ANALOG CHANNEL OPERATIONAL TEST shall consist of verifying that the interlock is in the required state by observing the permissive annunciator window.

(9) Monthly surveillance in MODES 3*, 4*, and 5* shall also include verification that permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window. Monthly surveillance shall include verification of the Boron Dilution Alarm Setpoint of less than or equal to an increase of twice the count rate within a 10-minute period.

(10) Setpoint verification is not required.

(11) At least once per 18 months and following maintenance or adjustment of the Reactor trip breakers, the TRIP ACTUATING DEVICE OPERATIONAL TEST shall include independent verification of the Undervoltage and Shunt trips.

(12) At least once per 18 months during shutdown, verify that on a simulated Boron Dilution Doubling test signal the normal CVCS discharge valves will close and the centrifugal charging pumps suction valves from the RWST will open within 30 seconds.

(13) CHANNEL CALIBRATION shall include the RTD bypass loops flow rate.

The specified 18 month frequency may be waived for Cycle 1 provided the surveillance is performed prior to startup following Refuel 1 or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance.

TABLE 4.3-2

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Safety Injection (Reactor Trip, Phase "A" Isolation, Feedwater Isolation, Turbine Trip, Component Cooling Water, Auxiliary Feedwater-Motor-Driven Pump, Emergency Diesel Generator Operation, Containment Cooling, and Essential Service Water Operation)								
a. Manual Initiation	N.A.	N.A.	N.A.	R V #	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays (SSPS)	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q(3)	1, 2, 3, 4
c. Containment Pressure-High-1	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Pressurizer Pressure-Low	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Steam Line Pressure-Low	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
2. Containment Spray								
a. Manual Initiation	N.A.	N.A.	N.A.	R V #	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays (SSPS)	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q(3)	1, 2, 3, 4
c. Containment Pressure-High-3	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation								
a. Phase "A" Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays (SSPS)	N.A	N.A.	N.A.	N.A.	M(1)	M(1)	Q(3)	1, 2, 3, 4
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
b. Phase "B" Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R #	N.A.	N.A.	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays (SSPS)	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
3) Containment Pressure-High-3	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
c. Containment Purge Isolation								
1) Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic and Actuation Relays (SSPS)	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q(3)	1, 2, 3, 4
3) Automatic Actuation Logic and Actuation Relays (BOP ESFAS)	N.A.	N.A.	N.A.	N.A.	M(1)(2)	N.A.	N.A.	1, 2, 3, 4
4) Phase "A" Isolation	See Item 3.a. above for all Phase "A" Isolation Surveillance Requirements.							

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
9. Control Room Isolation								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	All
b. Automatic Actuation Logic and Actuation Relays (SSPS)	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q(3)	1, 2, 3, 4
c. Automatic Actuation Logic and Actuation Relays (BOP ESFAS)	N.A.	N.A.	N.A.	N.A.	M(1)(2)	N.A.	N.A.	All
d. Phase "A" Isolation	See Item 3.a. above for all Phase "A" Isolation Surveillance Requirements.							
10. Solid-State Load Sequencer	N.A.	N.A.	N.A.	N.A.	M(1)(2)	N.A.	N.A.	1, 2, 3, 4
11. Engineered Safety Features Actuation System Interlocks								
a. Pressurizer Pressure, P-11	N.A.	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
b. Reactor Trip, P-4	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3

TABLE NOTATIONS

(1) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.
(2) Continuity check may be excluded from the ACTUATION LOGIC TEST.
(3) Except Relays K602, K620, K622, K624, K630, K740, and K741, which shall be tested at least once per 18 months during refueling and during each COLD SHUTDOWN exceeding 24 hours unless they have been tested within the previous 90 days.

The specified 18 month frequency may be waived for Cycle I provided the surveillance is performed prior to startup following Refuel I or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance

SURVEILLANCE REQUIREMENTS (Continued)

2) A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion.

e. At least once per 18 months, during shutdown, by:

1) Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection test signal and/or on Automatic Switchover to Containment Sump from RWST Level-Low-Low coincident with Safety Injection test signal; and

2) Verifying that each of the following pumps start automatically upon receipt of a Safety Injection actuation test signal:

a) Centrifugal charging pump,

b) Safety Injection pump, and

c) RHR pump.

. By verifying that each of the following pumps develops the required differential pressure on recirculation flow when tested pursuant to Specification 4.0.5:

1) Centrifugal charging pump $\geq$ 2400 psid,

2) Safety Injection pump $\geq$ 1445 psid, and

3) RHR pump $\geq$ 165 psid.

g. By verifying the correct position of each mechanical position stop for the following ECCS throttle valves:

1) Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE, and

2) At least once per 18 months.

HPSI System Valve Numbers		CVCS System Valve Numbers
EMV095	EMV109	BGV-198
EMV096	EMV110	BGV-199
EMV097	EMV089	BGV-200
EMV098	EMV090	BGV-201
EMV107	EMV091	BGV-202
EMV108	EMV092	

The specified 18 month frequency may be waived for Cycle I provided the surveillance is performed prior to startup following Refuel 1 or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent Containment Spray Systems shall be OPERABLE with each Containment Spray System capable of taking suction from the RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one Containment Spray System inoperable, restore the inoperable Containment Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Containment Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position;

b. By verifying, that on recirculation flow, each pump develops a discharge pressure of greater than or equal to 250 psig when tested pursuant to Specification 4.0.5;

c. At least once per 18 months during shutdown, by:

1) Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure-High-3 (CSAS) test signal, and

2) Verifying that each spray pump starts automatically on a Containment Pressure-High-3 (CSAS) test signal.

d. At least once per 5 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

The specified 18 month frequency may be waived for Cycle I provided the surveillance is performed prior to startup following Refuel 1 or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.2 Each containment isolation valve specified in Table 3.6-1 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase "A" Isolation test signal, each Phase "A" isolation valve actuates to its isolation position, |

b. Verifying that on a Phase "B" Isolation test signal, each Phase "B" isolation valve actuates to its isolation position, and |

c. Verifying that on a Containment Purge Isolation test signal, each purge supply and exhaust isolation valve actuates to its isolation position.

4.6.3.3 The isolation time of each power operated or automatic valve of Table 3.6-1 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

The specified 18 month frequency may be waived for Cycle 1 provided the surveillance is performed prior to startup following Refuel 1 or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance. |

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.3 At least two component cooling water loops shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position. In addition, an ANALOG CHANNEL OPERATIONAL TEST of the surge tank level and flow instrumentation which provide automatic isolation of the non-nuclear safety-related portion of the system shall be performed at least once per 31 days;

b. At least once per 18 months during shutdown, by verifying that:

1) Each automatic valve servicing safety-related equipment or isolating the non-nuclear safety-related portion of the system actuates to its correct position on a Safety Injection and on a simulated High Flow and Low Surge Tank Level test signal, and

2) Each OPERABLE Component Cooling Water System pump starts automatically on a Safety Injection and Loss-of-Power test signal.

c. At least once per 18 months during shutdown, by performing a CHANNEL CALIBRATION of the surge tank level and flow instrumentation which provide automatic isolation of the non-nuclear safety-related portion of the system.

The specified 18 month frequency may be waived for Cycle I provided the surveillance is performed prior to startup following Refuel 1 or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance.

3/4.7.4 ESSENTIAL SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4 At least two independent essential service water (ESW) loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only one ESW loop OPERABLE, restore at least two ESW loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.4 At least two ESW loops shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position. In addition, at least once per 31 days, an ANALOG CHANNEL OPERATIONAL TEST of the differential pressure instrumentation for automatic isolation of the ESW to the air compressors shall be performed;

b. At least once per 18 months during shutdown, by verifying that:

1) Each automatic valve servicing safety-related equipment or isolating the non-nuclear safety-related portion of the system actuates to its correct position on a Loss-of-Power or Safety Injection test signal and on a simulated High Differential Pressure test signal; and

2) Each ESW System pump starts automatically on a Safety Injection, Low Suction Pressure (AFW pumps) and Loss-of-Power test signal.

c. At least once per 18 months during shutdown, by performing a CHANNEL CALIBRATION of the differential pressure instrumentation for automatic isolation of the ESW to the air compressors.

The specified 18 month frequency may be waived for Cycle I provided the surveillance is performed prior to startup following Refuel 1 or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance.

a) An API Gravity of within 0.3 degrees at 60°F, or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity of greater than or equal to 27 degrees but less than or equal to 39 degrees;

b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes, if gravity was not determined by comparison with the supplier's certification;

c) A flash point equal to or greater than 125°F; and

d) A clear and bright appearance with proper color when tested in accordance with ASTM-D4176-82.

2) By verifying within 30 days of obtaining the sample that the other properties specified in Table 1 of ASTM-D975-81 are met when tested in accordance with ASTM-D975-81 except that the analysis for sulfur may be performed in accordance with ASTM-D1552-79 or ASTM-D2622-82.

e. At least once every 31 days by obtaining a sample of fuel oil in accordance with ASTM-D2276-78, and verifying that total particulate contamination is less than 10 mg/liter when checked in accordance with ASTM-D2276-78, Method A;

f. At least once per 18 months, during shutdown, by:

1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service;

2) Verifying the diesel generator capability to reject a load of greater than or equal to 1352 kW (ESW pump) while maintaining voltage at 4000 ± 320 volts and frequency at 60 ± 5.4 Hz;

3) Verifying the diesel generator capability to reject a load of 6201 kW without tripping. The generator voltage shall not exceed 4784 volts during and following the load rejection;

4) Simulating a loss-of-offsite power by itself, and:

a) Verifying deenergization of the emergency busses and load shedding from the emergency busses, and

b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 12 seconds, energizes the auto-connected shutdown loads through the shutdown sequencer and operates for greater than or equal to 5 minutes while its generator

The specified 18 month frequency may be waived for Cycle I provided the surveillance is performed prior to startup following Refuel 1 or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance.

b. At least once per 92 days and within 7 days after a battery discharge with battery terminal voltage below 110 volts, or battery overcharge with battery terminal voltage above 150 volts, by verifying that:

1) The parameters in Table 4.8-2 meet the Category B limits,

2) There is no visible corrosion at either terminals or connectors, or the cell-to-cell and terminal connection resistance of these items is less than 150 x 10^{-6} ohm, and

3) The average electrolyte temperature of at least every sixth cell is above 60°F.

c. At least once per 18 months by verifying that:

1) The cells, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration,

2) The cell-to-cell and terminal connections are clean, tight, and coated with anti-corrosion material,

3) The resistance of each cell-to-cell and terminal connection is less than or equal to 150 x 10^{-6} ohm, and

4) The battery charger will supply at least 300 amperes at 130.2 volts for at least 1 hour.

d. At least once per 18 months, during shutdown, by verifying that the battery capacity is adequate to supply and maintain in OPERABLE status simulated emergency loads for the design duty cycle when the battery is subject to a battery service test;

e. At least once per 60 months, during shutdown, by verifying that the battery capacity is at least 80% of the manufacturer's rating when subjected to a performance discharge test. Once per 60 month interval this performance discharge test may be performed in lieu of the battery service test required by Specification 4.8.2.1d.; and

f. At least once per 18 months during shutdown, by giving performance discharge tests of battery capacity to any battery that shows signs of degradation or has reached 85% of the service life expected for the application. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous performance tests, or is below 90% of the manufacturer's rating.

The specified 18 month frequency may be waived for Cycle I provided the surveillance is performed prior to startup following Refuel 1 or June 1, 1986, whichever occurs first. The provisions of Specification 4.0.2 are reset from performance of this surveillance.

Safety Evaluation

Items 1 through 4 of Enclosure 1 are manual initiations of the Reactor Trip System and Engineered Safety Features Actuation System. Testing of these circuits would cause initiation of their protection system function at power, causing plant upset and/or reactor trip as described in SNUPPS FSAR 7.1.2.5.2. The manual initiation circuitry consists of manual switches on the main control board wired directly to the master relay. Closing the switch contacts of one switch will cause actuation of the master relay for Items 1 and 2. Items 3 and 4 require the simultaneous depression of two switches to cause actuation of the master relay. These switches are not train dependent (i.e., one set actuates both trains). Since the circuits contain only switch contacts, require no calibration, and are not required to respond to setpoints, they historically have exhibited a low failure rate. These manual circuits were last tested on 3/10/84 for Train A and 3/17/84 for Train B and therefore require an approximate four-month extension of the surveillance interval. Operability of individual components (i.e., pumps, valves) is proven on a regular basis by other surveillance requirements. In addition, the SSPS logic and master relays are tested on a monthly basis and all but seven slave relays are tested (including component actuations) quarterly. Of the remaining seven relays, two are tested quarterly by a continuity check. The remaining five are tested on 18-month intervals and are current into Refuel 1. It is therefore concluded that the extension for these four items does not present a significant safety concern.

Union Electric is also requesting an extension of the surveillance interval for portions of Specification 4.8.1.1.2.f (Item 11 to Enclosure 1). Since this testing involves both the LOCA and SHUTDOWN sequencers, Specifications 4.5.2.e.2) (Item 5), 4.6.2.1.c.2) (Item 6), 4.6.3.2.a (Item 7), 4.6.3.2.b (Item 8), 4.7.3.b.2 (Item 9) and 4.7.4.b.2) (Item 10) are satisfied by the same test procedure and require the same extension. This test procedure requires extensive testing of the diesel generators, load shedding and load sequencing. It is performed in Modes 5/6 where only one diesel generator is required to be OPERABLE and injections to the RCS and containment spray may be blocked without violation of the Technical Specifications or placing the plant in an unsafe condition. The following parts of Specification 4.8.1.1.2.f require an approximate six-month extension of the Technical Specification surveillance allowance. Parts f.1), f.3) and f.11) do not require extension since they are current into Refuel 1.

4.8.1.1.2.f.2)
Demonstration of the capability of the diesel generators to reject a load of greater than or equal to 1352 KW (ESW PUMP) while maintaining voltage at 4000 ± 320 volts and a frequency at 60 ± 5.4 Hz. Since performance of part f.3) of this

Specification demonstrated the diesel's capability to reject a full load without tripping and is current into Refuel 1, it is concluded that this extension does not present a significant safety concern.

4.8.1.1.2.f.4)
Demonstration of the diesel generator capability to respond to a loss-of-offsite power by shedding the loads from the emergency busses, starting the diesel and sequencing the loads back on the busses via the SHUTDOWN SEQUENCER. On 2/22/85, Callaway Plant experienced a partial loss-of-offsite power due to the loss of the startup transformer which deenergized one safeguards bus. The loads were shed from the bus, the diesel generator started and auto-closed onto the bus and the loads sequenced on as designed. Although this was a single train actuation, it provides the basis for stating that this extension does not present a significant safety concern.

4.8.1.1.2.f.5)
Demonstration of the capability of the diesel generator to respond to a Safety Injection Signal without a loss-of-offsite power and to sequence the loads onto the offsite power source via the LOCA SEQUENCER. On 3/30/85 while in Mode 3, Callaway Plant experienced a Safety Injection without a loss-of-offsite power. A review of the alarm printout verified the diesels started and remained running in standby; the loads sequenced on the busses as designed. Those components for Specifications 4.5.2.e.2), 4.6.3.2.a, 4.7.3.b.2 and 4.7.4.b.2) which were not running, out-of-service, or in their actuated state were verified to actuate or to sequence on via this printout. Although no credit for surveillances is taken for this event, it provides sufficient confidence that this extension does not present a significant safety concern. The portion of the surveillance test procedure which covers Specification 4.8.1.1.2.f.5) also tests the Containment Spray Actuation System (4.6.2.1.c.2)) and the Phase B Isolation (4.6.3.2.b). These tests can only be run in Modes 5/6 in order to prevent an actual spray down of containment. Operability of individual components (i.e., pumps, valves) is proven on a regular basis by other surveillance requirements. In addition, the SSPS logic and master relays are tested on a monthly basis and all but seven slave relays are tested (including component actuations) quarterly. Of the remaining seven relays, two are tested quarterly by a continuity check. The remaining five are tested on 18-month intervals and are current into Refuel 1. Based on the actuation on 3/30/85 and the other periodic surveillances of components, the approximate six-month extension of surveillances 4.5.2.e.2), 4.6.2.1.c.2), 4.6.3.2.a, 4.6.3.2.b, 4.7.3.b.2, 4.7.4.b.2) and 4.8.1.1.2.f.5) does not present a significant safety concern.

4.8.1.1.2.f.6)
Demonstrates diesel generator and load sequencer capability on a loss-of-offsite power in conjunction with a Safety Injection Signal. Although no events have tested this combination since

the last surveillance in February 1984, sufficient overlap of the actuations previously discussed coupled with the periodic testing of the diesels provides sufficient justification to conclude that the requested extension of the surveillance interval does not present a significant safety concern.

4.8.1.1.2.f.7)
Diesel generator 24-hour endurance run followed by an auto-start and loading via the LOCA sequencer. Based on the operational history of the diesels (only one valid failure which was attributed to the output breaker), the periodic testing required on a monthly basis and the demonstrated performance during the previously discussed events, the extension of the surveillance interval does not present a significant safety concern.

4.8.1.1.2.f.8)
Verification that auto connected loads to each diesel generator do not exceed 6201 KW. No loads have been added to the sequencers since performance of the last surveillance in March 1984 and therefore an extension of this surveillance does not present a significant safety concern.

4.8.1.1.2.f.9)
Verification of the ability to synchronize the emergency bus with offsite power, transfer loads and return the diesel to standby. Although not accomplished in this specific manner, the diesel generators are synchronized to offsite power, run under full load for an hour and returned to their standby status on a monthly basis. These tests provide sufficient confidence in the operators' and diesel generators' capabilities to justify the extension of the surveillance interval.

4.8.1.1.2.f.10)
Verification of the test mode of the diesel generator with a Safety Injection Signal. Although no events or testing have exercised this particular function of the diesel generators since the last surveillance in March 1984, the overall reliability of the diesels has been demonstrated via a variety of events and periodic surveillances. This provides sufficient confidence in the diesel generators to justify the surveillance interval extension requested.

4.8.1.1.2.f.12)
Verification of OPERABILITY of the LOCA and SHUTDOWN sequencers. Although the sequencers have not been timed since the last surveillance in January 1984, they have demonstrated their capability on the two events discussed. The alarm printout for the 3/30/85 event does show the proper interval for components being sequenced on and therefore provides the necessary confidence that the timing of these sequencers is still within design tolerances. Based on this, the extension of the surveillance interval as requested does not present a significant safety concern.

Union Electric is also requesting an approximate six-month extension of the allowable surveillance interval for Specification 4.8.2.1.d, Battery Service Test. In support of this request, the following sections address the preoperational test results, weekly and quarterly battery surveillances, and the provisions of Regulatory Guide 1.129.

1. Preoperational Test Results

The 125 V Class 1E batteries were subjected to a service test and a performance discharge test during Preoperational Test CS-03NK01, 125 V Class 1E DC System, on 2/9/84. Technical Specification Surveillance 4.8.2.1.d requires the battery service test to be performed 18 months later on 8/8/85 with an allowable extension until 12/22/85 based on the 1.25 criterion of Specification 4.0.2.

The preoperational service test determined that the batteries meet the design requirements of the connected loads. IEEE Standard 450-1975 states,

> "If the battery does not meet its service load in accordance with its system design criteria, review its rating to see if it is properly sized, equalize the battery, and if necessary, inspect the battery as discussed in Section 3.3.4 and take necessary corrective actions. A battery performance test (Section 4.2) may also be required to determine whether the problem is the battery or the application."

No problem is expected to occur with the batteries because the battery capacities determined by the preoperational performance discharge test were considerably higher than the acceptance criteria established by IEEE Standard 450-1975. The standard states that

> "degradation is indicated when the battery capacity drops more than 10 percent of rated capacity from its average on previous performance tests, or is below 90 percent of the manufacturer's rating."

The battery capacities for NK11, NK12, NK13, and NK14 were 104%, 125%, 123%, and 107.7%, respectively. Based on the facts that the batteries are relatively new and the most limiting capacity was 14 percentage points above the acceptance criteria, a decrease of 10% and/or decrease below the 90% criterion is not expected during the extension allowed by the proposed changes.

The performance of the battery service test also serves the purpose of identifying problems associated with the application of the batteries. Based on the fact that the results of the preoperational service test were approximately 10% or greater than the acceptance criteria and the fact that no

substantial loads have been added to the batteries since the preoperational test, no problems associated with the battery application are expected to occur during the extension allowed by the proposed changes.

2. Weekly and Quarterly Battery Surveillances

Each of the parameters listed below are verified to meet the specified acceptance criteria at the indicated frequency as required by Technical Specification 4.8.2.1:

a. Electrolyte level (every 7 days)
b. Float voltage (every 7 days)
c. Specific gravity (every 7 days)
d. Total battery terminal voltage (every 7 days)
e. Visible corrosion at terminals or connections, or cell-to-cell and terminal connection resistance (every 92 days)
f. Average electrolyte temperature (every 92 days)

Performance of the above surveillance provides a means of identifying potential problems associated with the batteries. Therefore the probability of an undetected, inoperable battery is considered minimal during the six-month extension provided by this change.

3. Provisions of Regulatory Guide 1.129

While Regulatory Guide 1.129 does specify a minimum test interval of 18 months, it also provides for the testing to be done during refueling operations or other outages. With no outages scheduled between the present time and the first refueling outage, it would be both impractical and uneconomical to schedule an outage for the purpose of service testing the 125 V Class 1E batteries.

Based on the information above, the proposed revision to Technical Specification Surveillance 4.8.2.1.d would not present a significant safety concern.

Conclusion

Based on the safety evaluation provided hereinabove, Union Electric deems the request for extension of surveillance intervals for those Specifications listed in Enclosure 1 to involve no significant hazard because this amendment as submitted does not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or

2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or

3. Involve a significant reduction in a margin of safety.