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VICE PRESIDENT
NUCLEAR PRODUCTION

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November 11, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: Catawba Nuclear Station
Docket Nos. 50-413 and 50-414

Dear Mr. Denton:

On September 30, 1983 representatives from Duke Power Company and the NRC Staff met at the NRC's office in Bethesda, Maryland to discuss two items identified by the Power Systems Branch in the Catawba Safety Evaluation Report.

Open Item 15 - Emergency Lighting

Duke agreed to provide a listing of plant locations that had emergency lighting. This information is provided in the attached revision to FSAR Section 9.5.3.

License Condition 18 - Internal Corrosion Protection for Fuel Oil Storage Tanks

The following is a summary of the discussion on this issue.

System Description

The diesel fuel oil system at Catawba includes four 45,000 gal. storage tanks per unit or 2 tanks per diesel. The tanks are fabricated from 3/8 inch nominal thickness carbon steel which includes a 1/32 inch corrosion allowance. Each tank is approximately 12 feet in diameter and buried under approximately 5 feet of backfill and a concrete pad. The Unit 1 fuel oil tanks were coated with motor oil following sand blasting and were filled with fuel oil in March 1980.

A recirculation and purification system takes suction from the flush mounted sample connection on the bottom of the tank and discharges the fuel oil at a rate of 25 gpm through a simplex filter (25 micron particle removal rating). The supply lines to the day tank are connected by an outlet raised 6 inches above the bottom of the tank.

Statement of Disagreement

The Staff's imposition of License Condition 18 apparently derives from NUREG-0800, Section 9.5.4, Acceptance Criteria 4.F, which incorporates the recommendations of ANSI N195. The Staff's reliance on ANSI N195 was discussed in Duke's letter

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of June 1, 1983. The ANS Committee that wrote this standard unanimously agreed that an internal corrosion allowance met the requirements of Section 7.5. Therefore, ANSI N195 is not an appropriate basis for requiring an internal tank coating.

In Section 9.5.4.2 of the SER the Staff presents a number of arguments in rejecting Duke's position. Each of these will be addressed.

Tank Volume

The SER consistently misrepresents the tank volume as 90,000 gallons. As previously discussed each diesel has two 45,000 gallon tanks. Therefore, comparisons between the FSAR and SER are exaggerated bacause of the SER's misstatement of tank volume.

Tank Corrosion

The Staff disagrees with Duke's position that the fuel oil will act as a deterrent to internal corrosion and further speculates that the upper portion of the tanks will be exposed to a "harsh environment" and prone to corrosion.

Contrary to the Staff's conclusions, an inspection of Tank 1B1 on July 8, 1983 revealed that there had been no general corrosion of the tank, not even in the upper portion, since the tanks were installed in winter 1979/80 and filled in March 1980.

Condensation

Duke and the Staff disagreed on the volume of water that would condense in the fuel oil storage tanks. It was agreed that the actual quantity of water condensed did not matter since condensation and impurities would be drained off the bottom of the tanks via the recirculation and purification system.

Previous Experience

Duke has had extensive experience with buried fuel oil storage tanks as shown on the attached list. Tanks at two locations have been in the ground for over 40 years.

In the 238 tank-years of operating experience represented by these nine plants, no problems have been experienced.

Coating Reliability

In taking a position that the Catawba fuel oil storage tanks should be coated, the Staff has failed to address the issue of the reliability of a coating applied to a tank that has held oil.

Coatings vendors contacted by Duke indicated that the tanks could be emptied, cleaned, sand blasted and coated; however, contamination by the previously contained fuel oil could lead to delamination of the coating.

Filling of Tanks

The Staff requested additional information on Duke's plans for maintaining the fuel oil tanks nearly full. In accordance with the Technical Specifications the tanks will be maintained greater than approximately 90% full. Furthermore, it will be a normal practice to order additional fuel oil whenever there is sufficient capacity in the tanks to accept a full tanker truck load. It should be pointed out that fuel oil could not be added to both half-capacity tanks serving the same diesel. As discussed in FSAR Section 9.5.4.3 in response to question 430.66, the contents of a fuel oil tank are allowed to settle for at least 24 hours prior to realigning the tank to its respective diesel. Therefore, all tanks could not be "topped off" at the same time.

Conclusion

It is Duke's position that--

1) General internal corrosion has not occurred and will be minimized during the lifetime of the plant due to a combination of design features and operating features including:

   a) Periodic (quarterly) drainage of water accumulation

   b) Use of high quality fuel (water and sediment content less than 0.05% volume)

   c) Keeping the fuel oil tanks nearly full in accordance with Technical Specifications

   d) Periodic (10 year) tank cleaning

2) Extensive experience with buried fuel oil tanks has identified no problems with uncoated tanks.

Based on the information provided at the September 30, 1983 meeting and in this letter, it is requested that the two SER items discussed above be closed out in a future Supplement to the Catawba SER.

Very truly yours,

Hal B. Tucker

Hal B. Tucker

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Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
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NRC Resident Inspector
Catawba Nuclear Station

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Buried Fuel Oil Tanks on Duke System

Plant	In Service
Cliffside	1940
Buck	1941
Dan River	1949
Lee	1951
Riverbend	1952
Allen	1957
Marshall	1965
Oconee	1973
McGuire	1981

9.5.3 LIGHTING SYSTEMS

The plant is provided with adequate illumination through the integrated use of normal and emergency lighting systems. These lighting systems provide illumination for normal and emergency plant operation.

9.5.3.1 Normal Lighting System

The Normal Lighting System provides general illumination throughout the plant in accordance with the illumination levels recommended by the Illuminating Engineering Society. Power to the Normal Lighting System is supplied from independent 600VAC motor control centers through individual 600-208Y/120VAC dry-type transformers located in selected areas throughout the plant. All lighting in the Reactor Building is incandescent, while incandescent, flourescent, and high intensity discharge (HID) lighting is provided for the Auxiliary and Turbine Buildings. Normal lighting panelboards and their associated transformers and motor control centers are located such that a single failure in the Normal Lighting System will not result in a total loss of illumination in any area.

9.5.3.2 Emergency Lighting Systems

9.5.3.2.1 Design Bases

The emergency lighting systems are designed to assure that adequate lighting is provided in all vital areas of the plant including essential access routes to these areas. A single failure analysis of the emergency lighting system is provided in Table 9.5.3-1.

9.5.3.2.2 Emergency 250VDC Lighting System

The Emergency 250VDC Lighting System provides general emergency lighting for the control room and selected stairways and corridors throughout the plant. Voltage sensing relays automatically energize the normally deenergized emergency DC lighting system in the event of a loss of normal lighting. Power to the Emergency 250VDC Lighting System is from the 250VDC Auxiliary Power System as described in Section 8.3.2. Emergency 250VDC Lighting available for a safe shutdown condition is shown in Table 9.5.2-2. Emergency 250VDC Lighting available to illuminate safety related equipment is shown in Table 9.5.3-2.

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9.5.3.2.3 Emergency 208Y/120VAC Lighting System

The Emergency 208Y/120VAC Lighting System provides general emergency lighting in the control room, stair, exits, corridors, and manned safe shutdown areas as listed in Table 9.5.2-2. Emergency 280Y/120VAC Lighting available to illuminate safety related equipment is shown in Table 9.5.3-2.

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The emergency AC lighting is divided into two independent trains (A and B) arranged such that a single failure will not result in a total loss of illumination in any area served. Voltage sensing relays automatically energize the normally deenergized emergency AC lighting in the event of a loss of normal lighting. Power to train A and B of the Emergency 208Y/120VAC Light System is from the A and B diesel-generators, respectively, through independent trains of the Essential Auxiliary Power System as described in Section 8.3.1. This power will be available to the system within 8 hours of the start of diesel generators.

9.5.3.2.4 Emergency 8 Hour Battery Lighting

The Emergency 8 Hour Battery Lighting System is provided specifically for station illumination and access/egress for safe shutdown of the plant and for any other emergency situations that may arise. This safe shutdown and other emergency lighting is provided in the control room, access and egress stairs, exits, and corridors, and manned safe shutdown areas as listed in Table 9.5.2-2. Emergency 8 Hour Battery Lighting available to illuminate safety related equipment is shown in Table 9.5.3-2.

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The 8 Hour Battery Lighting System consists of individual 200 watt, self-contained, sealed lead calcium battery units. The units are normally on continuous charge from the unit normal auxiliary power system. Upon loss of normal voltage these are energized. Means are provided to test each lighting unit individually.

9.5.4 DIESEL GENERATOR ENGINE FUEL OIL SYSTEM

9.5.4.1 Design Bases

The Diesel Generator Engine Fuel Oil System is designed to provide for the storage of a seven-day supply of fuel oil for each diesel generator engine and to supply the fuel oil to the engine, as necessary, to drive the emergency generator. The system is designed to meet the single failure criterion, and to withstand the effects of natural phenomena without the loss of operability.

TABLE 9.5.3-2 (Page 1)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3			EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4		
		8-HR. BATTERY	EMERG.AC	EMERG.DC	8-HR. BATTERY	EMERG.AC	EMERG.DC
CA	MOTOR DRIVEN AUX. FEEDWATER PUMPS 1A, 1B, 2A, 2B					X	X
	STEAM TURB. DRIVEN AUX. FEEDWATER PUMP	X			X	X	X
	AUX. FEEDWATER CONTROL PANELS ASP1A, ASP1B	X	X	X	X	X	X
EIA	AUX. RELAY RACKS 1ARRI, 1ARR2		X	X	X	X	X
	PROTECTION SET I, II, III, IV, Cabinets 1, 2, 3, 4		X	X	X	X	X
EME	RCP VOLTAGE AND FREQ SYS. PANEL 1RCPM					X	X
EOA	MAIN CONTROL BOARDS 1MC1-1MC13, 2MC1-2MC13 MC14	X	X	X	X	X	X
	CONTROL BOARD INPUT CABINETS 1IC1-1IC18, 1IC20, 2IC1-2IC18, 2IC20		X	X		X	X

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TABLE 9.5.3-2 (Page 2)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3			EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4		
		8-HR. BATTERY	EMERG.AC	EMERG.DC	8-HR. BATTERY	EMERG.AC	EMERG.DC
(EOA)	CONTROL BOARD INPUT CABINETS 1IC21, 1IC22, 1IC26-1IC33, 2IC21, 2IC22, 2IC26-2IC33		X	X			
EPB	PT's FEEDING RCP POWER MONITOR					X	X
EPC	4160 SWITCHGEAR GROUP 1ETA, 1ETB	X	X	X	X	X	X
	4160 SWITCHGEAR GROUP 2ETA, 2ETB	X	X	X	X	X	X
EPE	600V LOAD CENTER 1ELXA, 2ELXA	X	X	X	X	X	X
	600V LOAD CENTER 1ELXB, 2ELXB	X	X	X	X	X	X
	600V LOAD CENTER 1ELXC, 2ELXC	X	X	X	X	X	X
	600V LOAD CENTER 1ELXD, 2ELXD	X	X	X	X	X	X
	600V MCC 1EMXA, 2EMXA	X			X	X	X
	600V MCC 1EMXB, 2EMXB	X			X	X	X
	600V MCC 1EMXC, 2EMXC	X	X	X	X	X	X
	600V MCC 1EMXD, 2EMXD	X			X	X	X
	600V MCC 1EMXE, 2EMXE	X			X	X	X
	600V MCC 1EMXF, 2EMXF	X	X	X	X	X	X
	600V MCC 1EMXG, 2EMXG		X	X	X	X	X
	600V MCC 1EMXI, 2EMXI	X			X	X	X
	600V MCC 1EMXJ, 2EMXJ	X			X	X	X
	600V MCC 1EMXK, 2EMXK	X	X	X	X	X	X

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TABLE 9.5.3-2 (Page 3)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3			EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4		
		8-HR. BATTERY	EMERG.AC	EMERG.DC	8-HR. BATTERY	EMERG.AC	EMERG.DC
(EPE)	600V MCC 1EMXL, 2EMXL	X			X	X	X
	600V MCC 1EMXO, 2EMXO	X			X		
	600V MCC 1EMXQ, 2EMXQ	X			X		
	600V MCC 1EMXR, 2EMXR	X			X		
EPG	STATIC INVERTER 1EIA, 2EIA		X	X		X	X
	STATIC INVERTER 1EIB, 2EIB					X	X
	STATIC INVERTER 1EIC, 2EIC		X	X		X	X
	STATIC INVERTER 1EID, 2EID		X	X		X	X
	POWER PANEL 1ERPA, 2ERPA		X	X		X	X
	POWER PANEL 1ERPB, 2ERPB					X	X
	POWER PANEL 1ERPC, 2ERPC					X	X
	POWER PANEL 1ERPD, 2ERPD		X	X		X	X
EPL	BATTERY CHARGER 1ECA, 2ECA		X	X		X	X
	BATTERY CHARGER 1ECB, 2ECB					X	X
	BATTERY CHARGER 1ECC, 2ECC					X	X
	BATTERY CHARGER 1ECD, 2ECD					X	X

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TABLE 9.5.3-2 (Page 4)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3 8-HR. BATTERY	EMERG.AC	EMERG.DC	EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4 8-HR. BATTERY	EMERG.AC	EMERG.DC
(EPL)	BATTERY 1EBA, 2EBA					X	X
	BATTERY 1EBB, 2EBB					X	X
	BATTERY 1EBC, 2EBC					X	X
	BATTERY 1EBD, 2EBD					X	X
	DC DISTR.CENTER 1EDA, 2EDA					X	X
	DC DISTR.CENTER 1EDB, 2EDB					X	X
	DC DISTR.CENTER 1EDC, 2EDC					X	X
	DC DISTR.CENTER 1EDD, 2EDD					X	X
	DC PANELS 1EPA-1EPD					X	X
	DC PANELS 2EPA-2EPD					X	X
	DC SPARE CHGR.DISTR. CTR 1EDS, 2EDS					X	X
	SPARE CHGR. 600V AC POWER PNL 1EMS, 2EMS					X	X
	AUCTIONEERING D10DES 1EADA, 2EADA	X	X	X	X	X	X
	AUCTIONEERING D10DES 1EADB, 2EADB	X	X	X	X	X	X
	DC DISTR.CENTER 1EDE, 2EDE	X	X	X	X	X	X
	DC DISTR.CENTER 1EDF, 2EDF	X	X	X	X	X	X
EPQ	DG BATTERIES DGB1A&B, DGB2A&B	X	X	X	X	X	X
	BATTERY CHGR DGC1A&B, DGC2A&B	X	X	X	X	X	X

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TABLE 9.5.3-2 (Page 5)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3			EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4		
		8-HR. BATTERY	EMERG.AC	EMERG.DC	8-HR. BATTERY	EMERG.AC	EMERG.DC
(EPQ)	AUCT.DIODES 1VADA, 2VADA	X	X	X	X	X	X
	AUCT.DIODES 1VADB, 2VADB	X	X	X	X	X	X
	DISTR.CTR.1DGA&B, 2DGA&B	X	X	X	X	X	X
EPY	TRANSFORMER 1EKTG		X	X	X	X	X
	TRANSFORMER 2EKTH		X	X	X	X	X
	TRANSFORMER, 1EKTB,	X			X	X	X
	1EKTI, 2EKTB, 2EKTI	X			X	X	X
EQA	EMERG.DIESEL GENERATOR	X	X	X	X	X	X
EQC	DIESEL GEN.CONTROL PANELS 1A, 1B, 2A, 2B	X	X	X	X	X	X
	DIESEL CONTROL PANELS 1A, 1B, 2A, 2B	X	X	X	X	X	X
	DIESEL GEN.EXCITATION VOLTAGE REG.CONTROL PANELS 1A, 1B, 2A, 2B	X	X	X	X	X	X
ERN	DIESEL GEN.GROUND TRANSFORMERS	X	X	X	X	X	X
	DIESEL GEN.RESISTOR BOXES	X	X	X	X	X	X
	DIESEL GEN.SURGE PACKS	X	X	X	X	X	X
	DIESEL GEN.GROUND CT's	X	X	X	X	X	X

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TABLE 9.5.3-2 (Page 6)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3			EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4		
		8-HR. BATTERY	EMERG.AC	EMERG.DC	8-HR. BATTERY	EMERG.AC	EMERG.DC
(ERN)	DIESEL GEN. RELAY CABINETS 1ETAC14, 15, 2ETAC14, 15	X	X	X	X	X	X
EWA	CABLE ROOM CABLE SUPPORT SYS					X	X
EWB	BATTERY ROOM CABLE SUPPORT SYS					X	X
EZA	ELECTRICAL PENETRATIONS					X	X
N/A	AREA TERMINAL CABINETS 1EATC1-1EATC19				X	X	X
	2EATC1-2EATC19				X	X	X
	AREA TERMINAL BOXES 1T BOX 1-27					X	X
FD	DIESEL GENERATOR FUEL OIL DAY TANKS	X	X	X	X	X	X
	DIESEL GENERATOR FUEL OIL BOOSTER PUMPS	X	X	X	X	X	X
	DIESEL GENERATOR FUEL OIL RELIEF VALVES	X	X	X	X	X	X
IPE	REACTOR PROT.SYS.SOLID STATE PROT SYS RACKS	X			X	X	X

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TABLE 9.5.3-2 (Page 7)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3			EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4		
		8-HR. BATTERY	EMERG.AC	EMERG.DC	8-HR. BATTERY	EMERG.AC	EMERG.DC
(IPE)	AUX. SAFEGUARD CABINET AUX. SHUTDOWN PANELS 1A, 1B	X	X	X	X	X	X
ISE	ESF TEST CABINET				X	X	X
IJE	TURBINE TERMINAL BOX A, B, D, E					X	
KC	COMPONENT COOLING WTR. PUMPS	X			X	X	X
	COMPONENT COOLING HEAT EXCH.	X			X	X	X
	COMPONENT COOLING SURGE TK					X	X
KD	DIESEL GEN.COOLING WTR. HEAT EXCH				X	X	X
	DIESEL GEN JACKET WTR. PUMPS				X	X	X
	DIESEL GEN JACKET WTR. STANDPIPE				X	X	X
KF	SPENT FUEL COOLING PUMPS					X	X
	SPENT FUEL COOLING HEAT EXCH					X	X
	SPENT FUEL COOLING PUMP SUCTION STRAINERS					X	X

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TABLE 9.5.3-2 (Page 8)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3 8-HR. BATTERY	EMERG.AC	EMERG.DC	EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4 8-HR. BATTERY	EMERG.AC	EMERG.DC
LD	DIESEL GENERATOR LUBE OIL FILTERS	X			X	X	X
	DIESEL GENERATOR LUBE OIL COOLERS	X			X	X	X
	DIESEL GENERATOR LUBE OIL RELIEF VLVs	X			X	X	X
	DIESEL GENERATOR LUBE OIL HEAT EXCH	X			X	X	X
	DIESEL GENERATOR LUBE OIL SUMP TK	X			X	X	X
NB	BORON RECYCLE EVAP FEED PUMPS					X	X
	BORON RECYCLE HOLDUP TANK					X	X
	BORON RECYCLE EVAP FEED FILTERS					X	X
	BORON RECYCLE GAS STRIPPER PKG					X	X
ND	RESIDUAL HEAT REMOV. PUMPS	X			X	X	X
	RESIDUAL HEAT REMOV. HEAT EXCH	X			X	X	X
NI	SAFETY INJECTION PUMPS					X	X
	BORON INJ.RECIRC.PUMPS					X	X
	SAFETY INJ.ACCUMULATORS	X			X	X	X
	BORON INJ. TANK					X	X
	UHI WATER ACCUMULATORS				X	X	X
	UHI NITROGEN ACCUMULATORS				X	X	X
	UHI SURGE TANK				X	X	X

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TABLE 9.5.3-2 (Page 9)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3 8-HR. BATTERY	EMERG.AC	EMERG.DC	EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4 8-HR. BATTERY	EMERG.AC	EMERG.DC
NM	NUCLEAR SAMPLING DELAY COIL				X		
	NUCLEAR SAMPLING VLV. OPER. PNL				X		
NR	BORON THERMAL REG. MOD. HEAT EXCH					X	X
	BORON THERMAL REG. LETDOWN CHILLER					X	X
	BORON THERMAL REG. LETDOWN REHEAT					X	X
	THERMAL REG. DEMINERALIZER					X	X
NS	CONTAINMENT SPRAY PUMPS					X	X
	CONTAINMENT SPRAY HEAT EXCH					X	X
NV	CHEMICAL AND VOLUME CONTROL CHARGING PUMPS					X	X
	CHEMICAL AND VOLUME CONTROL BORIC ACID TRANSFER PUMPS						
	CHEMICAL AND VOLUME CONTROL LETDOWN HEAT EXCH	X			X	X	X
	CHEMICAL AND VOLUME CONTROL TANK					X	X
	CHEMICAL AND VOLUME CONTROL BORIC ACID TANK					X	X

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TABLE 9.5.3-2 (Page 10)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3 8-HR. BATTERY	EMERG.AC	EMERG.DC	EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4 8-HR. BATTERY	EMERG.AC	EMERG.DC
RF	FIRE PROT DIESEL ROOM CONTROL PANEL	X			X	X	X
SM	MAIN STEAM ISOLATION VLVS.					X	X
SV	MAIN STEAM SAFETY VLVS. RELIEF VLVS.					X	X
VA	AUX. BLDG. VENT SYS. FILTERS					X	X
VC	CONTROL BLDG. VENT SYS FAN					X	X
	CONTROL BLDG. VENT SYS FILTERS					X	X
	CONTROL BLDG. VENT SYS A/C UNITS					X	X
	CONTROL BLDG. VENT SYS HVAC AUX. RELAY CAB. A&B					X	X
VD	DIESEL BLDG. VENT FANS				X	X	X
	DIESEL BLDG. VENT FILTERS				X	X	X
	DIESEL BLDG. VENT DAMPERS				X	X	X
VP	CONTAINMENT PURGE VENT SYS ISOLATION VALVES					X	X
WG	WASTE GAS COMPRESSOR PKG.					X	X
	WASTE GAS TANKS					X	X

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TABLE 9.5.3-2 (Page 11)

LIGHTING SYSTEMS AVAILABLE TO ILLUMINATE SAFETY RELATED EQUIPMENT NOTE 1, 2

SYSTEM	EQUIPMENT	EMERG. LIGHTING AT EQUIP NOTE 3 8-HR. BATTERY	EMERG.AC	EMERG.DC	EMERG. LIGHTING FOR ACCESS TO EQUIP NOTE 4 8-HR. BATTERY	EMERG.AC	EMERG.DC
(WG)	WASTE GAS HYDROGEN RECOMBINERS					X	X
WL	LIQUID WASTE SYS. DRAIN TK RHR & CS ROOM SUMP				X	X	X
WN	DIESEL GEN ROOM SUMPS				X	X	X
	DIESEL GEN ROOM SUMPS PUMP PANELS				X	X	X
WS	SPENT RESIN STORAGE TK						
YC	CONTROL AREA CHILLER COMPRESSOR CRA-C-1, 2 PANELS				X	X	X

NOTES:

1 EQUIPMENT LISTING TAKEN FROM "NUCLEAR SAFETY RELATED STRUCTURES, SYSTEMS, AND COMPONENTS"

2 LISTING DOES NOT CONTAIN EQUIPMENT LOCATED IN REACTOR BLDGS.

3 LISTED LIGHTING IS LOCATED IN CLOSE PROXIMITY TO EQUIPMENT LISTED

4 LISTED LIGHTING IS LOCATED IN CORRIDORS/AREAS OUTSIDE ROOMS, ALCOVES, ETC. THAT EQUIPMENT IS LOCATED IN.

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