October 27, 1981

Docket No. 50-369

Mr. William O. Parker, Jr.
Vice President Steam Production
Duke Power Company
P.O. Box 2178
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Parker:

Subject: Issuance of Amendment No. 7 to Facility Operating License NPF-9 - McGuire Nuclear Station, Unit 1

The Nuclear Regulatory Commission has issued Amendment No. 7 to Facility Operating License NPF-9 for the McGuire Nuclear Station, Unit 1, located in Mecklenburg County, North Carolina.

This amendment is in response to your letter dated August 12, 1981. Amendment No. 3 issued on August 28, 1981, addressed a portion of one item in that request. This amendment revises setpoints to selected Engineered Safety Features Actuation System instrumentation, corrects measurement range of the Unit Vent Noble Gas Effluent Monitor, revises surveillance requirements for certain fire detection instrumentation and hydrogen monitors, revises listings of hydraulic and mechanical snubbers, revises response time and test current value for a circuit breaker, revises surveillance requirements for monitoring Chemical Treatment Pond radionuclide inventory, and clarifies Special Test Program exceptions. The amendment is effective as of its date of issuance.

A copy of the related safety evaluation report supporting Amendment No. 7 to Facility Operating License NPF-9 is enclosed. Also enclosed is a copy of a related notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

S/

Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Enclosures:
1. Amendment No. 7
2. Safety Evaluation
3. Federal Register Notice

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P PDR

cc w/encl: See next page

OFFICE	LA:DL:LB #4	DL:LB #4	DL:LB #4			
SURNAME	MDuncan/hmc	RBirkel	EAdensam			
DATE	10/8/81	10/13/81	10/20/81			

McGuire

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OFFICE ▶							
SURNAME ▶							
DATE ▶							

DUKE POWER COMPANY

DOCKET NO. 50-369

MCGUIRE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 7
License No. NPF-9

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment to the McGuire Nuclear Station, Unit 1 (the facility) Facility Operating License No. NPF-9 filed by the Duke Power Company (licensee) dated August 12, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public;

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-9 is hereby amended to read as follows:

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   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 7, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

OFFICE ▶							
SURNAME ▶							
DATE ▶							

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

S/

Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing

Attachment:
Technical Specification
changes

Date of Issuance: October 27, 1981

E.K. for Amendment & F.R. notice only as requested.

OFFICE	LA:DL:LB #4	DL:LB #4	LGB	OELD	DL:LB#4	AD:L:DL	
SURNAME	MDuncan/hmc	RBirkel	MVirgilio	E.K. Ketchen	EAdensam	RTedesco	
DATE	10/8/81	10/9/81	10/20/81	10/21/81	10/20/81	10/20/81	

ATTACHMENT TO LICENSE AMENDMENT NO. 7

FACILITY OPERATING LICENSE NO. NPF-9

DOCKET NO. 50-369

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Overleaf Page	Amended Page
3/4 3-17	3/4 3-18
3/4 3-26	3/4 3-25
3/4 3-27	3/4 3-28
3/4 3-35	3/4 3-36
3/4 3-51	3/4 3-52
	3/4 3/52a
3/4 6-30	3/4 6-29
3/4 7-29	3/4 7-30
3/4 7-31	3/4 7-32
3/4 7-33	3/4 7-34
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	3/4 7-69
	3/4 7-70
3/4 7-72	3/4 7-71
3/4 8-51	3/4 8-52
3/4 11-7	3/4 11-8
6-11	6-12
6-14	6-13
	7-1

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. TURBINE TRIP AND FEEDWATER ISOLATION					
a. Steam Generator Water Level--High-High	3/loop	2/loop in any operating loop	2/loop in each operating loop	1, 2, 3	14*
6. CONTAINMENT PRESSURE CONTROL SYSTEM					
a. Train A	4	2	3	1, 2, 3, 4	19*
b. Train B	4	2	3	1, 2, 3, 4	19*
7. AUXILIARY FEEDWATER					
a. Manual Initiation	2	1	2	1, 2, 3	22
b. Automatic Actuation Logic	2	1	2	1, 2, 3	21
c. Stm. Gen. Water Level-Low-Low					
i. Start Motor-Driven Pumps	4/stm. gen.	2/stm. gen. any stm gen.	3/stm. gen.	1, 2, 3#	19
ii. Start Turbine-Driven Pumps	4/stm. gen.	2/stm. gen. any 2 stm. gen.	3/stm. gen	1, 2, 3	19
d. S.I. Start Motor-Driven Pumps	See 1 above (all S.I. initiating functions and requirements)				

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
e. Station Blackout Start Turbine-Driven Pump and Motor-Driven Pumps	6-3/Bus	2/Bus Either Bus	2/Bus	1, 2, 3	19
f. Auxiliary Feedwater Suction Pressure-Low	2/pump	2/pump	2/pump	1, 2, 3	23a
g. Trip of Main Feedwater Pumps Start Motor-Driven Pumps	2	1/pump	1/pump	1, 2#	13
8. LOSS OF POWER					
a. Grid Degraded Voltage	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	14*
9. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure - P-11	3	2	2	1, 2, 3	20a
b. T_{avg} - P-12	4	2	3	3	20b
c. Steam Generator Level-P-14	3/loop	2/loop in any operating loop	2/loop in each operating loop	1, 2	20c
10. RWST LEVEL					
a. Automatic Switchover to Recirculation	3	2	2	1, 2, 3	14*

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
8. LOSS OF POWER		
a. Grid Degraded Voltage	3464 ± 173 volts with a 8.5 ± 0.5 second time delay.	≥ 3200 volts
9. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS		
a. Pressurizer Pressure Manual Block of Safety Injection P-11	≤ 1955 psig	≤ 1965 psig
b. Pressurizer Pressure Manual Enable of Steamline Isolation, P-11	≥ 1955 psig	≥ 1945 psig
c. T_{avg} Affects Steam Dump, P-12	≥ 553°F	≥ 551°F
d. Steam Generator Level Turbine Trip, Feedwater Isolation P-14	(See 5. above)	
10. RWST LEVEL		
a. Automatic Switchover to Recirculation	≥ 120 inches	≥ 114 inches

TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
1. Manual	
a. Safety Injection (ECCS)	Not Applicable
Feedwater Isolation	Not Applicable
Reactor Trip (SI)	Not Applicable
Containment Isolation-Phase "A"	Not Applicable
Auxiliary Feedwater Pumps	Not Applicable
Nuclear Service Water System	Not Applicable
Containment Air Recirculation Fan	Not Applicable
b. Containment Spray	Not Applicable
Containment Isolation-Phase "B"	Not Applicable
Containment Vent and Purge Isolation	Not Applicable
Annulus Ventilation System	Not Applicable
c. Containment Isolation-Phase "A"	Not Applicable
Containment Vent and Purge Isolation	Not Applicable
d. Steam Line Isolation	Not Applicable
e. Purge and Exhaust Isolation	Not Applicable
2. Containment Pressure-High	
a. Safety Injection (ECCS)	$\leq$ 27.0(1)
b. Reactor Trip (from SI)	$\leq$ 2.0
c. Feedwater Isolation	$\leq$ 9.0
d. Containment Isolation-Phase "A" (4)	$\leq$ 18.0(5)/28.0(6)
e. Containment Vent and Purge Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Nuclear Service Water System	$\leq$ 65.0(5)/76.0(6)
h. Component Cooling Water System	$\leq$ 65.0(5)/76.0(6)
3. Pressurizer Pressure-Low	
a. Safety Injection (ECCS)	$\leq$ 27.0(1)/12.0(5)
b. Reactor Trip (from SI)	$\leq$ 2.0

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
c. Feedwater Isolation	≤ 9.0
d. Containment Isolation-Phase "A" (4)	≤ 18.0(5)/28.0(6)
e. Containment Vent and Purge Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Nuclear Service Water System	≤ 76.0(1)/65.0(5)
h. Component Cooling Water - System	≤ 76.0(1)/65.0(5)
4. Negative Steam Line Pressure Rate - High	
a. Steam Line Isolation	≤ 9.0
5. Steam Line Pressure-Low	
a. Safety Injection (ECCS)	≤ 12.0(5)/22.0(6)
b. Reactor Trip (from SI)	≤ 2.0
c. Feedwater Isolation	≤ 9.0
d. Containment Isolation-Phase "A" (4)	≤ 18.0(5)/28.0(6)
e. Containment Vent and Purge Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Nuclear Service Water System	≤ 65.0(5)/76.0(6)
h. Component Cooling Water System	≤ 65.0(5)/76.0(6)
i Steam Line Isolation	≤ 9.0
6. Containment Pressure--High-High	
a. Containment Spray	≤ 45.0
b. Containment Isolation-Phase "B"	Not Applicable
c. Steam Line Isolation	≤ 9.0
d. Containment Air Recirculation Fan	≤ 610.0
7. Steam Generator Water Level--High-High	
a. Turbine Trip	Not Applicable
b. Feedwater Isolation	≤ 13.0

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIMES IN SECONDS
8. Steam Generator Water Level--Low-Low	
a. Motor-driven Auxiliary Feedwater Pumps	≤ 60.0
b. Turbine-driven Auxiliary Feedwater Pump	≤ 60.0
9. Station Blackout	
a. Turbine-driven Auxiliary Feedwater Pump	≤ 60.0
b. Motor-driven Auxiliary Feedwater Pumps	≤ 60.0
10. RWST Level	
a. Automatic Switchover to Recirculation	≤ 60.0
11. Trip of Main Feedwater Pumps	
a. Motor-driven Auxiliary Feedwater Pumps	≤ 60.0
Note: Response time for Motor-driven Auxiliary Feedwater Pumps on all S.I. signal starts	≤ 60.0

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-13.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Fuel Storage Pool Area Criticality Monitor (Fuel Bridge)	1	*	$\leq$ 15 mR/hr	10^{-1} - 10^{4} mR/hr	24
b. Containment Area	2	1, 2, 3, & 4	N/A	10^{0} - 10^{8} rad/hr	28
2. PROCESS MONITORS					
a. Fuel Storage Pool Area Gaseous Activity - Ventilation System Isolation	1	**	$\leq$ 2 x background	10 - 10^{7} cpm	26
b. Control Room Outside Air Intake, Gaseous Activity- Ventilation System Isolation	2	ALL MODES	$\leq$ 2 x background	10 - 10^{7} cpm	27
c. Containment					
i. Gaseous Activity (Low Range)	1				
a)RCS Leakage Detection		1, 2, 3, & 4	N/A	10 - 10^{7} cpm	25
ii. Particulate Activity (Low Range)	1				
a)RCS Leakage Detection		1, 2, 3, & 4	N/A	10 - 10^{7} cpm	25
d. Noble Gas Effluent Monitors					
i. Unit Vent	1	1, 2, 3, & 4	N/A	10^{0} - 10^{8} rad/hr (gamma)	28

* With fuel in the storage pool or building
** With irradiated fuel in the storage pool

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure	M	R
2. Reactor Coolant Temperature - T_{HOT} and T_{COLD} (Wide Range)	M	R
3. Reactor Coolant Pressure - Wide Range	M	R
4. Pressurizer Water Level	M	R
5. Steam Line Pressure	M	R
6. Steam Generator Water Level - Narrow Range	M	R
7. RWST Water Level	M	R
8. Auxiliary Feedwater Flow Rate	M	R
9. Reactor Coolant System Subcooling Margin Monitor	M	R
10. PORV Position Indicator	M	R
11. PORV Block Valve Position Indicator	M	R
12. Safety Valve Position Indicator	M	R
13. In-Core Thermocouples	M	R
14. Containment Water Level (Wide Range)	M	R

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.7 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

With the number of OPERABLE fire detection instrument(s) less than the minimum number OPERABLE requirement of Table 3.3-11:

a. Within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect the containment at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.5.

b. Restore the inoperable instrument(s) to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to OPERABLE status.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.7.1 Each of the above required smoke detection instruments shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous six months.

Each of the above required fixed temperature/rate of rise detection instruments shall be demonstrated OPERABLE as follows:

a. For nonrestorable spot-type detectors, at least two detectors out of every hundred, or fraction thereof, shall be removed every five years and sent to a nationally recognized testing laboratory for tests. For each failure that occurs on the detectors removed, two additional detectors shall be removed and tested.

b. For restorable spot-type heat detectors, at least one detector on each signal initiating circuit shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Different detectors shall be selected for each test. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous six months.

4.3.3.7.2 The NFPA Code 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

4.3.3.7.3 The non-supervised circuits between the local panels in Specification 4.3.3.7.2 and the control room shall be demonstrated OPERABLE at least once per 31 days.

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN MONITORS

LIMITING CONDITION FOR OPERATION

3.6.4.1 Two independent containment hydrogen monitors shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen monitor inoperable, restore the inoperable monitor to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each hydrogen monitor shall be demonstrated OPERABLE by the performance of a CHANNEL CHECK at least once per 12 hours, a CHANNEL FUNCTIONAL TEST at least once per 31 days, and at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using hydrogen gas mixtures to obtain calibration points of:

a. Zero volume percent hydrogen.

b. Nine volume percent hydrogen.

ELECTRIC HYDROGEN RECOMBINERS - W

LIMITING CONDITION FOR OPERATION

3.6.4.2 Two independent containment hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying during a recombiner system functional test that the minimum heater sheath temperature increases to greater than or equal to 700°F within 90 minutes. Upon reaching 700°F, increase the power setting to maximum for 2 minutes and verify that the power meter reads greater than or equal to 60 kw.

b. At least once per 18 months by:

   1. Performing a CHANNEL CALIBRATION of all recombiner instrumentation and control circuits,

   2. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosure (i.e., loose wiring or structural connections, deposits of foreign materials, etc.), and

   3. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to 10,000 ohms.

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCA-FW- H121	1SNB.H	HH53 EL713-03	I	N	N
1-MCA-FW- H122	1SNB.H	HH53 EL697-06	I	N	N
1-MCA-FW- H123	1SNB.H	HH54 EL697-06	I	N	N
1-MCA-FW- H125	1SNB.H	HH56 EL697-06	I	N	N
1-MCA-FW- H126	1SNB.H	JJ50 EL762-04	A	N	N
1-MCA-FW- H134	2SNB.H	KK53 EL728-04	I	N	N
1-MCA-FW- H136	1SNB.H	KK52 EL759-00	A	N	N
1-MCA-FW- H148	1SNB.H	KK53 EL736-00	I	N	N
1-MCA-FW- H149	1SNB.H	KK53 EL736-06	I	N	N
1-MCA-FW- H160	2SNB.H	JJ50 EL759-11	I	Y	N
1-MCA-FW- H162	1SNB.H	JJ50 EL758-01	I	Y	N
1-MCA-KC- H457	3SNB.H	HH55 EL733-00	A	N	N
1-MCA-KC- H458	3SNB.H	HH56 EL733-00	A	N	N
1-MCA-KC- H459	3SNB.H	HH57 EL733-00	A	N	N
1-MCA-KC- H460	3SNB.H	HH57 EL733-00	A	N	N
1-MCA-KC-1066	1SNB.H	HH55 EL757-08	A	N	N
1-MCA-KC-1068	1SNB.H	JJ58 EL755-10	A	N	N
1-MCA-KC-1076	1SNB.H	HH54 EL747-09	A	N	N
1-MCA-KC-1097	1SNB.H	GG57 EL742-00	A	N	N
1-MCA-KC-1102	1SNB.H	KK56 EL717-11	I	N	N
1-MCA-KC-1106	1SNB.H	HH56 EL757-05	A	N	N
1-MCA-KC-1110	1SNB.H	KK55 EL760-10	A	N	N
1-MCA-KC-1313	1SNB.H	MM52 EL760-10	A	N	N
1-MCA-KC-2137	1SNB.H	GG57 EL740-07	A	N	N
1-MCA-KD-0052	1SNB.H	AA42 EL747-09	A	N	N

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCA-KD-0062	1SNB.H	BB42 EL747-09	A	N	N
1-MCA-KD-0074	1SNB.H	AA41 EL740-00	A	N	N
1-MCA-KD-0083	1SNB.H	AA42 EL743-07	A	N	N
1-MCA-KD-0084	1SNB.H	AA42 EL741-07	A	N	N
1-MCA-KD-0095	1SNB.H	AA41 EL737-04	A	N	N
1-MCA-KD-0099	1SNB.H	AA42 EL744-10	A	N	N
1-MCA-KD-0104	1SNB.H	BB41 EL739-10	A	N	N
1-MCA-KD-0113	1SNB.H	BB42 EL743-07	A	N	N
1-MCA-KD-0114	1SNB.H	BB42 EL741-08	A	N	N
1-MCA-KD-0125	1SNB.H	BB41 EL737-04	A	N	N
1-MCA-KD-0128	1SNB.H	BB41 EL744-10	A	N	N
1-MCA-KD-0163	1SNB.H	AA42 EL743-07	A	N	N
1-MCA-KD-0173	1SNB.H	BB42 EL743-07	A	N	N
1-MCA-KF- H451	1SNB.H	LL51 EL756-00	A	N	N
1-MCA-KF-2093	1SNB.H	PP51 EL759-03	A	N	N
1-MCA-KF-2097	1SNB.H	PP52 EL760-09	A	N	N
1-MCA-KR-1021	2SNB.H	LL55 EL776-00	A	N	N
1-MCA-KR-2079	1SNB.H	EE54 EL732-03	A	N	N
1-MCA-LD-0053	1SNB.H	AA42 EL734-08	A	N	N
1-MCA-LD-0063	1SNB.H	BB42 EL734-09	A	N	N
1-MCA-LD-0077	1SNB.H	AA43 EL737-00	A	N	N
1-MCA-LD-0078	1SNB.H	AA43 EL737-11	A	N	N
1-MCA-LD-0087	1SNB.H	AA43 EL744-12	A	N	N
1-MCA-LD-0107	1SNB.H	BB43 EL737-00	A	N	N
1-MCA-LD-0108	1SNB.H	BB43 EL737-11	A	N	N
1-MCA-LD-0112	1SNB.H	BB43 EL742-12	A	N	N
1-MCA-NB- H484	1SNB.H	NN51 EL742-03	A	N	N

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCA-NB- H486	1SNB.H	NN51 EL742-03	A	N	N
1-MCA-NB- H491	1SNB.H	NN51 EL742-03	A	N	N
1-MCA-NB- H493	1SNB.H	NN51 EL742-03	A	N	N
1-MCA-NB-1015	2SNB.H	NN56 EL742-06	I	N	N
1-MCA-NB-1033	1SNB.H	PP56 EL737-08	I	N	N
1-MCA-NB-1038	1SNB.H	PP56 EL742-06	I	Y	N
1-MCA-NB-1102	1SNB.H	NN59 EL729-00	A	N	N
1-MCA-NB-1196	1SNB.H	NN56 EL720-00	I	N	N
1-MCA-NB-1224	1SNB.H	NN56 EL719-06	I	N	N
1-MCA-NB-1244	1SNB.H	NN53 EL744-03	I	Y	N
1-MCA-NB-1372	1SNB.H	MM51 EL740-03	I	N	N
1-MCA-NB-1505	1SNB.H	PP59 EL726-09	I	N	N
1-MCA-NB-1506	2SNB.H	NN57 EL726-09	I	N	N
1-MCA-NB-1509	1SNB.H	PP61 EL726-09	I	N	N
1-MCA-NB-1539	1SNB.H	NN57 EL717-01	I	N	N
1-MCA-NB-1542	1SNB.H	PP57 EL717-01	I	N	N
1-MCA-NB-1560	1SNB.H	NN57 EL744-06	A	N	N
1-MCA-NB-1565	1SNB.H	QQ59 EL721-09	I	N	N
1-MCA-NB-1566	1SNB.H	QQ59 EL721-05	I	N	N
1-MCA-NB-1589	1SNB.H	QQ56 EL726-00	I	N	N
1-MCA-NB-2132	1SNB.H	NN56 EL743-06	I	N	N
1-MCA-NB-2306	1SNB.H	NN51 EL731-01	I	Y	N
1-MCA-NB-2310	1SNB.H	NN53 EL744-00	I	N	N
1-MCA-NB-2313	1SNB.H	NN53 EL744-00	I	N	N
1-MCA-NB-2317	1SNB.H	NN55 EL744-00	I	N	N
1-MCA-NB-2383	2SNB.H	PP56 EL745-06	I	N	N
1-MCA-NB-2384	1SNB.H	PP56 EL745-06	I	N	N
1-MCA-NB-2389	2SNB.H	PP56 EL739-04	I	N	N

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
#-1-MCA-NB-2391	1SNB.H	PP56 EL742-06	I	Y	N
1-MCA-NC- H053	1SNB.H	DD52 EL737-03	I	Y	N
1-MCA-NC- H056	1SNB.H	FF52 EL744-06	I	Y	N
1-MCA-NC- H068	1SNB.H	HH53 EL710-06	I	Y	N
1-MCA-NC- H070	1SNB.H	GG53 EL724-00	I	Y	N
1-MCA-NC- H074	1SNB.H	EE53 EL725-08	I	Y	N
1-MCA-ND- H175	1SNB.H	HH53 EL726-07	I	Y	N
1-MCA-ND- H178	1SNB.H	HH53 EL726-09	I	Y	N
1-MCA-ND- H179	1SNB.H	HH53 EL735-02	I	Y	N
1-MCA-ND- H181	1SNB.H	HH52 EL733-03	I	Y	N
1-MCA-ND- H246	2SNB.H	GG53 EL696-09	A	N	N
1-MCA-ND- H247	1SNB.H	GG53 EL696-09	A	N	N
1-MCA-ND- H248	1SNB.H	GG53 EL696-09	A	N	N
1-MCA-ND- H249	1SNB.H	FF53 EL696-09	A	N	N
1-MCA-ND- H250	1SNB.H	GG53 EL708-00	A	N	N
1-MCA-ND- H252	1SNB.H	HH53 EL706-00	I	Y	N
1-MCA-ND- H253	1SNB.H	HH53 EL706-00	I	Y	N
1-MCA-ND- H254	2SNB.H	HH53 EL708-00	I	Y	N
1-MCA-ND- H255	2SNB.H	HH54 EL708-00	I	Y	N
1-MCA-ND- H256	1SNB.H	HH54 EL706-00	I	Y	N
1-MCA-ND- H257	2SNB.H	HH55 EL708-00	I	Y	N
1-MCA-ND- H258	1SNB.H	GG53 EL726-00	I	Y	N
1-MCA-ND- H270	1SNB.H	MM52 EL755-09	I	N	N
1-MCA-ND- H271	1SNB.H	LL52 EL757-09	I	N	N
1-MCA-ND- H272	1SNB.H	HH52 EL734-03	I	Y	N
1-MCA-ND- H273	1SNB.H	JJ51 EL744-00	I	Y	N

#-Exempted from periodic functional testing.

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCA-ND- H274	2SNB.H	JJ52 EL742-06	I	Y	N
1-MCA-ND- H275	1SNB.H	HH52 EL741-00	I	Y	N
1-MCA-ND- H277	1SNB.H	HH52 EL741-00	I	Y	N
1-MCA-ND- H281	2SNB.H	KK52 EL743-08	I	Y	N
1-MCA-ND- H282	1SNB.H	KK52 EL738-03	I	N	N
1-MCA-ND- H286	1SNB.H	LL51 EL744-00	I	N	N
1-MCA-ND- H287	1SNB.H	LL51 EL744-00	I	N	N
1-MCA-ND- H289	1SNB.H	LL51 EL739-00	I	N	N
1-MCA-ND- H290	1SNB.H	LL52 EL742-06	I	N	N
1-MCA-ND- H296	1SNB.H	MM52 EL735-06	I	N	N
1-MCA-ND- H297	1SNB.H	MM52 EL742-06	I	N	N
1-MCA-ND- H298	1SNB.H	MM52 EL744-06	I	N	N
1-MCA-ND- H301	1SNB.H	HH53 EL715-11	I	Y	N
1-MCA-ND- H304	1SNB.H	HH53 EL728-07	I	Y	N
1-MCA-ND- H315	1SNB.H	KK51 EL744-10	I	N	N
1-MCA-ND- H321	1SNB.H	HH53 EL747-07	I	N	N
1-MCA-NI- H009	1SNB.H	HH53 EL723-07	I	Y	N
1-MCA-NI- H010	1SNB.H	HH53 EL719-00	I	Y	N
1-MCA-NI- H012	1SNB.H	GG53 EL724-06	I	Y	N
1-MCA-NI- H083	1ANB.H	JJ53 EL724-06	I	Y	N
1-MCA-NI- H249	1SNB.H	JJ53 EL725-03	I	Y	N
1-MCA-NI- H253	2SNB.H	HH53 EL724-06	I	Y	N
1-MCA-NI- H255	1SNB.H	HH53 EL724-06	I	Y	N
1-MCA-NI- H286	1SNB.H	JJ51 EL742-06	I	Y	N
1-MCA-NI- H315	1SNB.H	HH52 EL761-00	A	N	N
1-MCA-NI- H352	1SNB.H	JJ54 EL728-00	I	N	N

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
#-1-MCA-NI- H355	2SNB.H	FF53 EL716-00	I	Y	N
1-MCA-NS- H052	1SNB.H	JJ51 EL742-06	I	Y	N
1-MCA-NS- H053	1SNB.H	JJ52 EL744-00	I	Y	N
1-MCA-NS- H060	1SNB.H	JJ51 EL762-06	A	Y	N
1-MCA-NS- H061	1SNB.H	JJ51 EL759-09	I	Y	N
1-MCA-NS- H073	2SNB.H	JJ52 EL757-06	I	Y	N
1-MCA-NS- H085	2SNB.H	HH54 EL699-00	I	Y	N
1-MCA-NS- H088	1SNB.H	JJ53 EL722-00	I	Y	N
1-MCA-NS- H091	2SNB.H	KK52 EL734-06	I	Y	N
1-MCA-NS- H098	2SNB.H	HH53 EL716-06	I	Y	N
1-MCA-NS- H101	1SNB.H	HH52 EL734-00	I	Y	N
1-MCA-NS- H102	1SNB.H	HH53 EL728-03	I	Y	N
1-MCA-NS- H105	2SNB.H	GG54 EL704-02	I	N	N
1-MCA-NS- H106	2SNB.H	GG56 EL704-03	A	N	N
1-MCA-NV- H303	1SNB.H	JJ53 EL724-06	I	Y	N
1-MCA-NV- H306	1SNB.H	KK55 EL724-00	I	N	N
1-MCA-NV- H374	2SNB.H	GG52 EL745-06	I	Y	N
1-MCA-NV- H396	1SNB.H	GG52 EL745-06	I	Y	N
1-MCA-NV- H433	1SNB.H	JJ52 EL728-00	I	Y	N
1-MCA-NV- H435	1SNB.H	HH52 EL724-00	I	Y	N
1-MCA-NV- H450	1SNB.H	JJ55 EL726-00	I	N	N
1-MCA-NV- H457	1SNB.H	JJ56 EL724-00	I	N	N
1-MCA-NV- H464	1SNB.H	JJ54 EL726-00	I	N	N
1-MCA-NV- H467	1SNB.H	HH52 EL724-00	I	Y	N
1-MCA-NV- H471	1SNB.H	JJ55 EL726-00	I	N	N

#-Exempted from periodic functional testing.

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-BB-0663	1SNB.H	D 354 40-09 745-11	I	Y	N
1-MCR-BB-0665	1SNB.H	D 354 40-09 745-11	I	Y	N
1-MCR-BB-0666	1SNB.H	D 354 40-09 744-11	I	Y	N
1-MCR-BB-0701	1SNB.H	C 201 30-10 745-08	I	Y	N
1-MCR-BB-0709	1SNB.H	C 201 30-10 745-08	I	Y	N
1-MCR-BB-0710	1SNB.H	C 201 30-10 748-08	I	Y	N
1-MCR-BB-0713	1SNB.H	C 201 30-10 748-08	I	Y	N
1-MCR-BB-0714	1SNB.H	C 201 30-10 748-08	I	Y	N
1-MCR-CA- H382	1SNB.H	B 156 22-05 773-08	I	Y	N
1-MCR-CA- H388	1SNB.H	C 190 40-06 766-10	I	Y	N
1-MCR-CA- H389	1SNB.H	C 182 40-02 766-11	I	Y	N
1-MCR-CA- H391	1SNB.H	C 251 21-08 773-08	I	N	N
1-MCR-CA- H394	1SNB.H	C 180 32-00 769-06	I	Y	N
1-MCR-CA- H396	1SNB.H	B 113 22-05 773-08	I	N	N
1-MCR-CA- H443	1SNB.H	D 359 40-02 766-09	I	Y	N
1-MCR-CA- H445	1SNB.H	A 001 31-06 769-08	I	Y	N
1-MCR-CA- H447	1SNB.H	D 289 21-08 773-06	I	Y	N
1-MCR-CA- H487	1SNB.H	A 002 29-09 769-07	I	Y	N
1-MCR-CA- H490	1SNB.H	A 024 22-05 773-06	I	Y	N
1-MCR-CF- H159	2SNB.H	D 339 40-04 745-08	I	Y	N
1-MCR-CF- H160	1SNB.H	D 340 40-05 753-00	I	Y	N
1-MCR-CF- H189	1SNB.H	D 340 40-09 753-03	I	Y	N
1-MCR-CF- H210	1SNB.H	C 249 40-03 753-00	I	Y	N
1-MCR-CF- H302	2SNB.H	C 249 40-03 745-08	I	Y	N
1-MCR-KC-0538	1SNB.H	B 105 47-01 730-07	A	N	N
1-MCR-KC-0539	1SNB.H	B 111 49-02 730-00	I	Y	N
1-MCR-KC-0543	1SNB.H	A 054 50-09 729-00	A	N	N
1-MCR-KC-0544	1SNB.H	A 059 50-06 729-00	A	N	N
1-MCR-KC-0546	1SNB.H	A 069 48-00 729-01	A	N	N

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-KC-0573	1SNB.H	A 066 51-08 727-06	I	Y	N
1-MCR-KC-0574	1SNB.H	A 055 53-06 728-06	I	Y	N
1-MCR-KC-0580	1SNB.H	C 247 53-06 727-06	I	Y	N
1-MCR-KC-0661	1SNB.H	A 062 38-04 741-03	I	Y	N
1-MCR-KC-0818	1SNB.H	A 062 38-04 741-00	I	Y	N
1-MCR-KC-0827	1SNB.H	B 134 38-00 740-10	I	Y	N
1-MCR-KC-0828	1SNB.H	B 134 38-00 741-01	I	Y	N
1-MCR-KC-0870	1SNB.H	D 304 29-00 733-08	I	Y	N
1-MCR-KC-0871	1SNB.H	D 304 29-00 733-10	I	Y	N
1-MCR-KC-0880	1SNB.H	D 308 53-03 729-03	I	Y	N
#-1-MCR-NC-SG-A	2SNB.H	A 022 31-05 777-08	I	Y	N
#-1-MCR-NC-SG-B	2SNB.H	B 158 31-05 777-08	I	Y	N
#-1-MCR-NC-SG-C	2SNB.H	C 202 31-05 777-08	I	Y	N
#-1-MCR-NC-SG-D	2SNB.H	D 338 31-05 777-08	I	Y	N
1-MCR-NC-0502	1SNB.H	B 116 37-08 746-09	I	Y	N
1-MCR-NC-0546	1SNB.H	B 096 36-11 759-08	I	Y	N
1-MCR-NC-0549	1SNB.H	B 105 32-00 749-00	I	Y	N
1-MCR-NC-0551	1SNB.H	A 066 25-10 737-00	I	Y	N
1-MCR-NC-0554	1SNB.H	A 076 24-03 743-00	I	Y	N
1-MCR-NC-0557	1SNB.H	B 090 25-09 743-00	I	Y	N
1-MCR-NC-0559	1SNB.H	B 104 24-03 743-00	I	Y	N
1-MCR-NC-0561	1SNB.H	B 104 24-03 743-00	I	Y	N
1-MCR-NC-0562	1SNB.H	B 111 25-06 738-00	I	Y	N
1-MCR-NC-0564	1SNB.H	B 114 25-10 737-00	I	Y	N
1-MCR-NC-0565	1SNB.H	B 096 34-11 750-00	I	Y	N
1-MCR-NC-0570	1SNB.H	A 054 32-07 727-08	I	Y	N

#-Exempted from periodic functional testing.

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-NV-0718	1SNB.H	B 108 56-00 734-00	I	Y	N
1-MCR-NV-0729	1SNB.H	C 225 40-02 735-00	I	Y	N
1-MCR-NV-0734	1SNB.H	C 230 46-00 731-00	I	Y	N
1-MCR-NV-0735	1SNB.H	C 230 46-00 730-09	I	Y	N
1-MCR-NV-0738	1SNB.H	C 229 52-06 731-00	I	Y	N
1-MCR-NV-0741	1SNB.H	C 220 52-06 731-00	I	Y	N
1-MCR-NV-0746	1SNB.H	C 221 47-03 734-00	I	Y	N
1-MCR-NV-0747	1SNB.H	C 211 53-11 730-06	I	Y	N
1-MCR-NV-0758	1SNB.H	B 113 52-06 730-08	I	Y	N
1-MCR-NV-0760	1SNB.H	B 112 56-00 732-10	I	Y	N
1-MCR-NV-0761	1SNB.H	B 112 56-00 733-03	I	Y	N
1-MCR-NV-0763	1SNB.H	B 110 53-06 735-03	I	Y	N
1-MCR-NV-0766	1SNB.H	B 109 53-05 738-08	I	Y	N
1-MCR-NV-0791	1SNB.H	C 235 39-08 738-03	I	Y	N
1-MCR-NV-0792	1SNB.H	C 235 39-08 737-11	I	Y	N
1-MCR-NV-0805	1SNB.H	D 313 39-02 745-01	I	Y	N
1-MCR-NV-0807	1SNB.H	D 316 38-04 741-10	I	Y	N
1-MCR-NV-0808	1SNB.H	D 316 38-04 742-03	I	Y	N
1-MCR-NV-0831	1SNB.H	B 144 40-09 742-00	I	Y	N
1-MCR-NV-0840	1SNB.H	A 057 39-10 745-01	I	Y	N
1-MCR-NV-0851	1SNB.H	A 038 39-04 737-10	I	Y	N
1-MCR-NV-0852	1SNB.H	A 032 39-04 738-02	I	Y	N
1-MCR-NV-0855	1SNB.H	A 043 38-04 735-03	I	Y	N
1-MCR-NV-0931	1SNB.H	D 312 30-00 746-00	I	Y	N
1-MCR-NV-0949	1SNB.H	B 132 39-10 739-03	I	Y	N
1-MCR-NV-0983	1SNB.H	A 065 33-40 245-02	I	Y	N
1-MCR-NV-0953	1SNB.H	B 133 37-08 744-06	I	Y	N
1-MCR-NV-0954	1SNB.H	B 134 32-08 744-06	I	Y	N
1-MCR-NV-0956	1SNB.H	B 129 32-00 745-02	I	Y	N
1-MCR-NV-0963	1SNB.H	C 243 41-06 737-00	I	Y	N

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-NV-0966	1SNB.H	C 237 36-06 744-06	I	Y	N
1-MCR-NV-0967	1SNB.H	C 240 33-03 745-02	I	Y	N
1-MCR-NV-0969	1SNB.H	C 239 32-00 744-11	I	Y	N
1-MCR-NV-0970	1SNB.H	C 236 33-00 746-02	I	Y	N
1-MCR-NV-0972	1SNB.H	C 239 30-03 745-02	I	Y	N
1-MCR-NV-1005	1SNB.H	B 108 45-12 734-00	I	Y	N
1-MCR-NV-1006	2SNB.H	B 108 45-03 734-00	I	Y	N
1-MCR-NV-1007	1SNB.H	B 108 34-09 734-08	I	Y	N
1-MCR-NV-1011	1SNB.H	A 072 34-08 738-06	I	Y	N
1-MCR-NV-1014	1SNB.H	B 105 48-08 735-03	I	Y	N
1-MCR-NV-1031	1SNB.H	A 016 50-06 734-00	I	Y	N
1-MCR-NV-1032	1SNB.H	A 016 46-06 734-00	I	Y	N
1-MCR-NV-1034	1SNB.H	A 015 51-06 734-00	I	Y	N
1-MCR-NV-1043	1SNB.H	D 303 52-06 731-00	I	Y	N
1-MCR-NV-1047	1SNB.H	D 299 50-09 734-00	I	Y	N
1-MCR-NV-1048	1SNB.H	D 299 45-06 733-00	I	Y	N
1-MCR-NV-1051	1SNB.H	D 301 39-06 737-07	I	Y	N
1-MCR-NV-1052	1SNB.H	D 301 40-00 735-00	I	Y	N
1-MCR-NV-1060	1SNB.H	B 112 34-05 737-03	I	Y	N
1-MCR-NV-1064	1SNB.H	B 100 33-06 738-06	I	Y	N
1-MCR-NV-1067	1SNB.H	B 112 34-04 737-00	I	Y	N
1-MCR-NV-1070	1SNB.H	D 299 52-10 730-08	I	Y	N
1-MCR-NV-1071	1SNB.H	A 016 53-06 730-03	I	Y	N
1-MCR-NV-1147	1SNB.H	C 191 45-06 755-00	I	Y	N
1-MCR-NV-1201	1SNB.H	B 124 52-00 734-01	I	Y	N
1-MCR-NV-1206	1SNB.H	B 124 55-06 730-03	I	Y	N
1-MCR-NV-1213	1SNB.H	B 136 47-02 731-07	I	Y	N
1-MCR-NV-1214	1SNB.H	B 136 48-11 731-07	I	Y	N
1-MCR-NV-1227	1SNB.H	C 211 57-02 731-05	I	Y	N
1-MCR-NV-1232	1SNB.H	C 230 54-09 730-03	I	Y	N

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-SM- H006	1SNB.H	A 009 38-03 782-01	I	N	N
1-MCR-SM- H083	1SNB.H	B 096 38-00 738-02	I	Y	N
1-MCR-SM- H084	1SNB.H	C 185 38-00 782-04	I	N	N
1-MCR-SM- H086	1SNB.H	C 185 37-11 803-01	I	N	N
1-MCR-SM- H087	1SNB.H	C 186 37-11 804-06	I	N	N
1-MCR-SM- H090	1SNB.H	D 354 37-11 801-03	I	N	N
1-MCR-SM- H091	1SNB.H	D 354 37-11 802-01	I	N	N
1-MCR-SM- H093	1SNB.H	D 354 38-00 785-05	I	N	N
1-MCR-SM- H094	1SNB.H	D 354 38-00 784-08	I	N	N
1-MCR-SM- H158	1SNB.H	B 171 38-03 783-02	I	N	N
1-MCR-SM- H159	1SNB.H	B 171 38-03 782-04	I	N	N
1-MCR-SM- H161	1SNB.H	B 171 38-02 803-01	I	N	N
1-MCR-SM- H162	1SNB.H	B 171 38-02 804-02	I	N	N
1-MCR-VQ-0506	1SNB.H	C 260 58-11 755-00	I	N	N
1-MCR-VQ-0508	1SNB.H	C 262 60-05 755-00	I	N	N
1-MCR-VQ-0514	1SNB.H	C 262 61-08 809-09	I	N	N
1-MCR-WL- H996	1SNB.H	B 116 56-00 731-06	I	N	N
1-MCS-AS- H237	1SNB.H	-U32 EL747-00	I	N	N
1-MCT-CF- H101	1SNB.H	IH34 EL763-00	A	N	N
1-MCT-CF- H103	1SNB.H	IJ34 EL763-00	A	N	N
1-MCT-CF- H105	1SNB.H	IJ34 EL762-05	A	N	N
1-MCT-CF- H107	1SNB.H	IJ34 EL763-00	A	N	N
1-MCT-CF- H219	1SNB.H	IH32 EL751-06	A	N	N
1-MCT-CF- H224	1SNB.H	IJ34 EL754-06	A	N	N
1-MCT-CF- H232	1SNB.H	IJ34 EL751-06	A	N	N
1-MCT-CF- H233	1SNB.H	IG34 EL751-06	A	N	N
1-MCT-CF- H236	1SNB.H	IF32 EL747-07	A	N	N
1-MCT-CF- H240	2SNB.H	IG31 EL743-06	A	N	N

TABLE 3.7-4a

SAFETY RELATED HYDRAULIC SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCT-CF- H242	2SNB.H	IG30 EL743-06	A	N	N
1-MCT-CF- H247	1SNB.H	IF31 EL751-09	A	N	N
1-MCT-CF- H255	1SNB.H	IG32 EL753-00	A	N	N
1-MCT-CF- H257	1SNB.H	IG32 EL753-06	A	N	N
1-MCT-CF- H260	1SNB.H	IG32 EL755-06	A	N	N
1-MCT-SM- H041	2SNB.H	IB33 EL764-06	A	N	N
1-MCT-SM- H043	1SNB.H	IC33 EL764-03	A	N	N
1-MCT-SM- H051	1SNB.H	IG34 EL774-08	A	N	N
1-MCT-SM- H053	1SNB.H	IH34 EL774-08	A	N	N
1-MCT-SM- H054	1SNB.H	IH34 EL774-08	A	N	N
1-MCT-SM- H121	2SNB.H	IF33 EL742-10	A	N	N
1-MCT-SM- H123	2SNB.H	IE33 EL742-09	A	N	N
1-MCT-SM- H176	2SNB.H	IF33 EL742-09	A	N	N
1-MCT-SM- H177	2SNB.H	IE33 EL742-09	A	N	N
1-MCY-FW- H139	2SNB.H	KK49 EL757-09	A	N	N
2-MCA-NB- H089	1SNB.H	QQ57 EL723-00	I	N	N
2-MCA-NB- H013	1SNB.H	QQ60 EL721-05	A	N	N
2-MCA-NB- H014	1SNB.H	QQ60 EL721-09	A	N	N

*Snubbers may added to safety related systems without prior License Amendment to Table 3.7-4a provided that a revision to Table 3.7-4a is included with the next License Amendment request.

**Modifications to this column due to changes in high radiation areas may be made without prior License Amendment provided that a revision to Table 3.7-4a is included with the next License Amendment request.

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
MC-1683-KC.15-R013	1SNB.M	KK53 EL743-08	A	N	N
MC-1683-KC.21-R008A	1SNB.M	KK58 EL769-04	A	N	N
MC-1683-KC.39-R085	2SNB.M	MM58 EL725-10	A	N	N
MC-1683-KC.39-R086	2SNB.M	MM58 EL725-10	A	N	N
MC-1683-KC.48-R013	1SNB.M	JJ55 EL761-11	A	N	N
MC-1683-KC.59-R007	2SNB.M	KK56 EL757-10	A	N	N
MC-1683-NB.01-R025	1SNB.M	PP59 EL745-06	I	N	N
MC-1683-NB.05-R076A	1SNB.M	MM58 EL723-00	A	N	N
MC-1683-NB.09-R003A	1SNB.M	NN56 EL743-11	I	N	N
MC-1683-NB.14-R002A	1SNB.M	MM58 EL717-02	A	N	N
MC-1683-NB.19-R014	2SNB.M	PP56 EL726-04	A	N	N
MC-1683-NB.37-R004	1SNB.M	NN57 EL714-11	I	Y	N
MC-1683-NB.37-R006	1SNB.M	NN57 EL711-11	I	Y	N
MC-1683-NB.37-R010	1SNB.M	NN56 EL711-03	I	Y	N
MC-1683-NB.37-R011	1SNB.M	NN57 EL711-03	I	Y	N
MC-1683-NC.06-R007	1SNB.M	EE52 EL722-11	I	Y	N
MC-1683-NV.04-R015	1SNB.M	MM54 EL744-06	I	N	N
MC-1683-NV.06-R009A	1SNB.M	JJ51 EL734-10	I	Y	N
MC-1683-NV.06-R012A	2SNB.M	JJ51 EL734-01	I	Y	N
MC-1683-NV.06-R023A	1SNB.M	JJ50 EL735-03	I	Y	N
MC-1683-NV.11-R020	1SNB.M	KK54 EL724-00	I	Y	N
MC-1683-NV.16-R007	1SNB.M	LL51 EL745-02	I	Y	N
#-MC-1683-NV.50-R002	1SNB.M	KK53 EL741-02	I	Y	N
#-MC-1683-NV.53-R009	1SNB.M	LL53 EL742-09	I	Y	N
#-MC-1683-NV.58-R006	1SNB.M	KK50 EL745-01	I	Y	N

#-Exempted from periodic functional testing.

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
MC-1683-NV.59-R006	1SNB.M	JJ52 EL745-06	I	Y	N
MC-1683-NV.63-R001	1SNB.M	KK54 EL742-03	I	N	N
MC-1683-NV.64-R001	1SNB.M	KK54 EL741-05	I	N	N
MC-1683-RV.01-R005A	2SNB.M	PP54 EL778-09	A	N	N
MC-1683-RV.02-R003	1SNB.M	PP54 EL728-03	A	N	N
MC-1683-VI.12-R034	1SNB.M	FF53 EL741-06	I	Y	N
MC-1683-VI.12-R035	1SNB.M	FF52 EL743-09	I	Y	N
MC-1683-VI.12-R036	1SNB.M	JJ50 EL743-09	I	Y	N
MC-1683-VI.21-R017	1SNB.M	DD44 EL769-08	A	N	N
MC-1683-VI.21-R021	1SNB.M	EE44 EL793-07	A	N	N
MC-1683-VI.21-R022	1SNB.M	EE44 EL794-04	A	N	N
MC-1683-VI.21-R023	1SNB.M	EE44 EL749-07	A	N	N
MC-1683-VI.21-R024	1SNB.M	EE44 EL792-07	A	N	N
MC-1683-VI.21-R025	1SNB.M	EE44 EL793-04	A	N	N
MC-1683-VI.21-R026	1SNB.M	EE44 EL793-07	A	N	N
MC-1683-VI.21-R030	1SNB.M	EE44 EL791-09	A	N	N
MC-1683-VI.21-R032	1SNB.M	EE44 EL777-06	A	N	N
MC-1683-VI.22-R006	1SNB.M	EE53 EL799-06	A	N	N
MC-1683-VI.22-R007	1SNB.M	EE53 EL799-06	A	N	N
MC-1683-VI.22-R008	1SNB.M	EE53 EL799-06	A	N	N
MC-1683-VI.22-R009	1SNB.M	EE53 EL799-06	A	N	N
MC-1683-VI.22-R013	1SNB.M	EE53 EL784-06	A	N	N
MC-1683-VI.22-R015	1SNB.M	EE53 EL791-10	A	N	N
MC-1683-VI.22-R018	1SNB.M	EE53 EL795-10	A	N	N
MC-1683-VI.22-R022	1SNB.M	EE53 EL795-10	A	N	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
MC-1683-VI.22-R024	1SNB.M	EE53 EL799-06	A	N	N
MC-1683-VI.25-R-012	1SNB.M	BBA42 EL754-08	A	N	N
MC-1683-WG.11-R004A	1SNB.M	NN53 EL725-06	I	Y	N
MC-1683-WG.38-R002	1SNB.M	MM52 EL724-00	I	N	N
MC-1683-WL.05-R013	1SNB.M	MM58 EL723-00	I	N	N
MC-1683-WL.13-R007	1SNB.M	LL61 EL727-00	I	N	N
MC-1683-WL.23-R004	1SNB.M	LL60 EL715-03	I	Y	N
MC-1683-WL.23-R009	1SNB.M	LL60 EL711-03	I	Y	N
MC-1683-WL.23-R010	1SNB.M	LL60 EL712-00	I	Y	N
MC-1683-WL.23-R011	1SNB.M	LL60 EL711-03	I	Y	N
1-MCA-AS- H216	1SNB.M	NN52 EL763-00	A	N	N
1-MCA-AS- H372	1SNB.M	MM52 EL763-00	A	N	N
1-MCA-BB- H326	1SNB.M	FF53 EL734-03	I	Y	N
1-MCA-BB- H330	1SNB.M	EE53 EL737-09	I	Y	N
1-MCA-BB- H339	1SNB.M	FF53 EL744-06	I	Y	N
1-MCA-BB- H352	2SNB.M	FF52 EL736-08	I	Y	N
1-MCA-BB- H361	1SNB.M	FF53 EL738-09	I	Y	N
1-MCA-BB- H378	1SNB.M	EE53 EL738-09	I	Y	N
1-MCA-BB- H381	1SNB.M	FF52 EL740-08	I	Y	N
1-MCA-BB- H394	1SNB.M	FF52 EL739-09	I	Y	N
1-MCA-CA- H159	1SNB.M	EE44 EL759-06	A	N	N
1-MCA-CA- H325	1SNB.M	BB60 EL724-00	A	N	N
1-MCA-CA- H347	1SNB.M	BB51 EL727-09	A	N	N
1-MCA-CA- H349	1SNB.M	BB51 EL727-09	A	N	N
1-MCA-CA- H415	1SNB.M	EE52 EL759-06	A	N	N
1-MCA-CA- H419	1SNB.M	EE52 E1579-06	A	N	N
1-MCA-CA- H459	1SNB.M	DD45 EL756-03	A	N	N
1-MCA-CA- H464	2SNB.M	EE44 EL759-06	A	N	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCA-CA- H467	1SNB.M	EE44 EL759-06	A	N	N
1-MCA-CA- H498	1SNB.M	DD53 EL756-06	A	N	N
1-MCA-CF- H292	2SNB.M	DD53 EL755-09	A	N	N
1-MCA-CF- H293	1SNB.M	DD53 EL765-00	A	N	N
1-MCA-CF- H320	1SNB.M	EE52 EL755-03	A	N	N
1-MCA-CF- H340	1SNB.M	EE44 EL759-09	A	N	N
1-MCA-CFI-5660	1SNB.M	EE53 EL753-00	A	N	N
1-MCA-CFI-5680	1SNB.M	EE44 EL754-03	A	N	N
1-MCA-FW- H109	1SNB.M	HH53 EL718-00	I	N	N
1-MCA-FW- H111	1SNB.M	KK53 EL721-07	I	Y	N
1-MCA-FW- H124	1SNB.M	HH55 EL697-06	I	N	N
1-MCA-FW- H128	1SNB.M	KK51 EL761-05	A	N	N
1-MCA-FW- H130	2SNB.M	KK53 EL761-00	A	N	N
1-MCA-FW- H131	3SNB.M	KK53 EL757-00	A	N	N
1-MCA-FW- H194	1SNB.M	KK53 EL761-01	A	N	N
1-MCA-KC- H344	1SNB.M	KK53 EL759-09	I	Y	N
1-MCA-KC- H804	1SNB.M	MM61 EL718-06	I	Y	N
1-MCA-KC-1023	1SNB.M	JJ57 EL767-07	A	N	N
1-MCA-KC-1062	1SNB.M	MM53 EL759-03	A	N	N
1-MCA-KC-1092	2SNB.M	HH57 EL744-09	A	N	N
1-MCA-KC-1095	1SNB.M	HH56 EL742-00	A	N	N
1-MCA-KC-2130	1SNB.M	HH55 EL741-10	A	N	N
1-MCA-KC-2133	1SNB.M	HH56 EL740-07	A	N	N
1-MCA-KC-2135	1SNB.M	HH57 EL740-07	A	N	N
1-MCA-KC-2321	2SNB.M	LL53 EL759-03	A	N	N
1-MCA-KF-1043	1SNB.M	PP51 EL759-03	A	N	N
1-MCA-KF-1045	1SNB.M	PP51 EL759-03	A	N	N
1-MCA-KF-2099	2SNB.M	PP51 EL756-08	A	N	N
1-MCA-NB- H907	1SNB.M	NN56 EL727-05	A	N	N
1-MCA-NB- H908	1SNB.M	NN56 EL724-10	A	N	N
1-MCA-NB- H917	1SNB.M	LL51 EL740-00	I	Y	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCA-NB- H919	1SNB.M	LL51 EL745-06	I	Y	N
1-MCA-NB- H935	2SNB.M	KK51 EL739-06	I	Y	N
1-MCA-NB-1012	2SNB.M	NN56 EL741-05	I	Y	N
1-MCA-NB-1036	1SNB.M	PP56 EL744-06	I	Y	N
1-MCA-NB-1319	1SNB.M	JJ51 EL746-06	I	Y	N
#-1-MCA-NB-2337	2SNB.M	QQ56 EL744-06	I	Y	N
#-1-MCA-NB-2342	1SNB.M	QQ56 EL744-06	I	Y	N
#-1-MCA-NB-2343	2SNB.M	PP56 EL745-01	I	Y	N
#-1-MCA-NB-2351	2SNB.M	QQ56 EL744-06	I	Y	N
1-MCA-NB-2358	1SNB.M	QQ56 EL744-07	I	Y	N
1-MCA-NB-2385	2SNB.M	PP56 EL742-06	I	Y	N
1-MCA-NB-2386	1SNB.M	PP56 EL742-06	I	Y	N
1-MCA-NC- H027	1SNB.M	FF52 EL738-00	I	Y	N
1-MCA-NC- H059	1SNB.M	FF52 EL738-00	I	Y	N
1-MCA-NC- H063	1SNB.M	HH52 EL738-05	I	Y	N
1-MCA-NC- H064	1SNB.M	HH52 EL738-04	I	Y	N
1-MCA-ND- H035	1SNB.M	LL52 EL740-10	I	N	N
1-MCA-ND- H110	1SNB.M	GG53 EL696-09	I	N	N
1-MCA-ND- H176	1SNB.M	HH53 EL726-00	I	Y	N
1-MCA-ND- H177	1SNB.M	HH53 EL724-00	I	Y	N
1-MCA-ND- H251	1SNB.M	HH53 EL708-00	I	N	N
1-MCA-ND- H260	1SNB.M	GG53 EL724-00	I	Y	N
1-MCA-ND- H295	1SNB.M	MM52 EL735-00	I	Y	N
1-MCA-ND- H324	1SNB.M	HH52 EL728-09	I	Y	N
1-MCA-ND- H325	1SNB.M	HH52 EL729-09	I	Y	N

#-Exempted from periodic functional testing.

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCA-ND- H326	1SNB.M	HH53 EL728-00	I	Y	N
1-MCA-ND- H327	2SNB.M	HH53 EL726-08	I	Y	N
1-MCA-ND- H331	1SNB.M	JJ52 EL726-00	I	Y	N
1-MCA-ND- H333	1SNB.M	LL51 EL740-10	I	N	N
1-MCA-NI- H101	1SNB.M	HH52 EL752-08	I	N	N
1-MCA-NI- H316	1SNB.M	HH52 EL761-00	A	N	N
1-MCA-NI- H357	1SNB.M	FF53 EL716-00	I	Y	N
1-MCA-NI- H360	1SNB.M	JJ53 EL763-00	A	N	N
1-MCA-NI- H364	1SNB.M	KK53 EL770-01	A	N	N
1-MCA-NV- H215	1SNB.M	LL55 EL723-03	A	N	N
1-MCA-NV- H310	1SNB.M	JJ52 EL726-01	I	Y	N
1-MCA-NV- H5578	1SNB.M	EE52 EL736-09	I	Y	N
1-MCA-NV- H5587	1SNB.M	HH52 EL736-09	I	Y	N
1-MCA-NV- H5589	1SNB.M	JJ51 EL740-06	I	Y	N
1-MCA-NV- H5591	1SNB.M	JJ52 EL741-01	I	Y	N
1-MCA-NV- H5593	1SNB.M	JJ52 EL741-01	I	Y	N
1-MCA-NV- H5595	1SNB.M	JJ51 EL741-01	I	Y	N
1-MCA-NV- H5602	1SNB.M	KK51 EL742-06	I	Y	N
1-MCA-NV- H5603	1SNB.M	MM56 EL722-06	A	N	N
1-MCA-NV- H5605	1SNB.M	GG53 EL740-09	I	Y	N
1-MCA-NV- H5608	1SNB.M	KK52 EL728-09	I	Y	N
1-MCA-NV- H5609	1SNB.M	JJ53 EL724-07	I	Y	N
1-MCA-NV- H5617	1SNB.M	FF53 EL745-08	A	N	N
1-MCA-NV- H5619	1SNB.M	KK53 EL723-07	I	Y	N
1-MCA-NV- H5621	2SNB.M	JJ59 EL726-00	I	Y	N
1-MCA-NV- H5622	2SNB.M	JJ55 EL724-00	I	Y	N
1-MCA-NV- H5624	1SNB.M	JJ53 EL721-02	I	Y	N
1-MCA-NV- H5625	1SNB.M	JJ53 EL724-06	I	Y	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCA-NV- H5630	1SNB.M	NN56 EL740-05	I	Y	N
1-MCA-NVI-6340	1SNB.M	JJ54 EL716-00	A	N	N
1-MCA-RN- H937	1SNB.M	FF55 EL724-06	A	N	N
1-MCA-RN- H941	1SNB.M	FF58 EL735-06	I	Y	N
1-MCA-RN- H956	1SNB.M	FF54 EL743-08	I	Y	N
1-MCA-RN- H959	1SNB.M	GG52 EL737-05	I	Y	N
1-MCA-RN-0974	1SNB.M	GG52 EL728-10	I	Y	N
1-MCA-RN-1053	1SNB.M	FF54 EL745-00	I	Y	N
1-MCA-RN-1180	1SNB.M	FF54 EL741-06	I	Y	N
1-MCA-RN-1305	1SNB.M	FF52 EL735-06	I	Y	N
1-MCA-RN-1323	1SNB.M	EE59 EL724-00	I	Y	N
1-MCA-RN-1500	1SNB.M	FF56 EL724-06	A	N	N
1-MCA-RN-1529	1SNB.M	EE59 EL737-08	I	Y	N
1-MCA-RN-1530	1SNB.M	FF59 EL737-06	I	Y	N
1-MCA-RN-1533	2SNB.M	FF59 EL732-00	I	Y	N
1-MCA-RN-2467	1SNB.M	FF53 EL738-00	I	Y	N
1-MCA-RN-2468	1SNB.M	EE53 EL729-05	I	Y	N
1-MCA-RN-2469	1SNB.M	EE53 EL731-06	I	Y	N
1-MCA-RN-2492	1SNB.M	MM52 EL744-00	A	Y	N
1-MCA-RN-2510	1SNB.M	EE53 EL731-00	I	Y	N
1-MCA-RN-2511	4SNB.M	EE53 EL731-00	A	Y	N
1-MCA-RV- H184	1SNB.M	NN56 EL770-06	A	N	N
1-MCA-RV- H187	1SNB.M	NN56 EL767-00	A	N	N
1-MCA-RV- H188	1SNB.M	QQ52 EL778-06	A	N	N
1-MCA-RV- H192	1SNB.M	QQ52 EL773-11	A	N	N
1-MCA-RV- H197	1SNB.M	NN56 EL779-03	A	N	N
1-MCA-RV- H203	1SNB.M	QQ52 EL777-06	A	N	N
1-MCA-SA- H022	1SNB.M	EE53 EL777-08	A	N	N
1-MCA-SA- H023	1SNB.M	EE53 EL776-07	A	N	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
#-1-MCA-SA- H025	1SNB.M	EE53 EL718-08	I	Y	N
1-MCA-SA- H026	1SNB.M	EE53 EL728-00	I	Y	N
1-MCA-SA- H027	1SNB.M	DD53 EL727-09	I	Y	N
1-MCA-SA- H032	1SNB.M	DD53 EL729-06	A	N	N
1-MCA-SA- H039	1SNB.M	AA53 EL727-09	A	N	N
1-MCA-SA- H107	1SNB.M	AA53 EL718-02	A	N	N
1-MCA-SM- H017	1SNB.M	GG43 EL760-06	A	N	N
1-MCA-SM- H076	1SNB.M	GG53 EL760-06	A	N	N
1-MCA-SM- H101	1SNB.M	GG44 EL760-06	A	N	N
1-MCA-SM- H164	1SNB.M	GG53 EL760-06	I	Y	N
1-MCA-SM- H194	1SNB.M	DD43 EL780-04	A	N	N
1-MCA-SM- H202	1SNB.M	EE43 EL795-03	A	N	N
1-MCA-SM- H203	1SNB.M	EE53 EL795-04	A	N	N
1-MCA-SM- H204	1SNB.M	EE53 EL795-04	A	N	N
1-MCA-SM- H205	1SNB.M	EE44 EL795-04	A	N	N
1-MCA-SV- H001	1SNB.M	GG44 EL795-00	A	N	N
1-MCA-SV- H006	1SNB.M	GG43 EL795-00	A	N	N
1-MCA-SV- H011	1SNB.M	GG53 EL795-00	A	N	N
1-MCA-WL- H479	2SNB.M	KK61 EL726-00	I	Y	N
1-MCA-YC-0181	1SNB.M	GG57 EL774-09	A	N	N
1-MCA-YC-0189	1SNB.M	FF58 EL776-08	A	N	N
1-MCR-BB- H001	1SNB.M	C 210 38-00 743-04	I	Y	N
1-MCR-BB- H071	1SNB.M	D 349 37-10 46-05	I	Y	N
1-MCR-BB-0500	1SNB.M	C 185 00-00 730-03	I	Y	N
1-MCR-BB-0522	1SNB.M	C 137 54-00 729-03	I	Y	N
1-MCR-BB-0523	1SNB.M	B 180 56-09 731-03	I	Y	N

#-Exempted from periodic functional testing.

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-BB-0716	1SNB.M	C 207 36-06 745-08	I	Y	N
1-MCR-BB-0717	2SNB.M	C 204 38-10 745-03	I	Y	N
1-MCR-BB-0718	1SNB.M	C 203 40-11 748-08	I	Y	N
1-MCR-BB-0719	1SNB.M	C 203 40-11 748-08	I	Y	N
1-MCR-BB-0721	1SNB.M	C 198 40-09 738-00	I	Y	N
1-MCR-BB-0725	1SNB.M	C 213 36-04 746-02	I	Y	N
1-MCR-BB-0726	1SNB.M	C 215 35-10 744-04	I	Y	N
1-MCR-BB-0727	1SNB.M	C 215 35-10 744-07	I	Y	N
1-MCR-BB-0729	1SNB.M	C 212 38-07 744-00	I	Y	N
1-MCR-BB-0730	1SNB.M	C 211 38-06 743-03	I	Y	N
1-MCR-BB-0732	1SNB.M	C 207 36-08 743-03	I	Y	N
1-MCR-BB-0733	1SNB.M	C 208 35-08 743-03	I	Y	N
1-MCR-BB-0734	1SNB.M	C 240 36-01 743-03	I	N	N
1-MCR-BB-0735	1SNB.M	C 212 37-09 744-06	I	Y	N
1-MCR-BB-0736	1SNB.M	C 212 37-09 745-03	I	Y	N
1-MCR-BB-0738	1SNB.M	C 207 36-08 747-02	I	Y	N
1-MCR-BB-0739	1SNB.M	C 207 36-08 747-02	I	Y	N
1-MCR-BB-0751	1SNB.M	C 192 40-06 732-08	I	Y	N
1-MCR-BB-0752	1SNB.M	C 192 40-06 732-08	I	Y	N
1-MCR-BB-0753	1SNB.M	C 183 40-06 736-00	I	Y	N
1-MCR-BB-0760	1SNB.M	B 153 40-09 742-05	I	Y	N
1-MCR-BB-0761	1SNB.M	B 153 40-09 742-01	I	Y	N
1-MCR-BB-0762	1SNB.M	B 157 38-07 743-04	I	Y	N
1-MCR-BB-0763	1SNB.M	B 158 38-03 746-03	I	Y	N
1-MCR-BB-0765	1SNB.M	B 153 38-10 746-06	I	Y	N
1-MCR-BB-0766	1SNB.M	B 153 38-10 747-09	I	Y	N
1-MCR-BB-0767	1SNB.M	B 153 38-10 748-00	I	Y	N
1-MCR-BB-0769	1SNB.M	B 147 36-04 748-07	I	Y	N
1-MCR-BB-0770	1SNB.M	B 145 35-04 745-10	I	Y	N
1-MCR-BB-0771	1SNB.M	B 142 34-05 745-10	I	Y	N
1-MCR-BB-0772	1SNB.M	B 151 41-02 747-06	I	Y	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-BB-0774	1SNB.M	B 146 28-06 749-07	I	Y	N
1-MCR-BB-0775	1SNB.M	B 152 38-06 747-11	I	Y	N
1-MCR-BB-0776	1SNB.M	B 162 36-02 748-07	I	Y	N
1-MCR-BB-0777	1SNB.M	B 157 41-01 746-00	I	Y	N
1-MCR-BB-0778	1SNB.M	B 159 38-02 746-06	I	Y	N
1-MCR-BB-0780	1SNB.M	B 153 41-00 746-04	I	Y	N
1-MCR-BB-0781	1SNB.M	B 153 39-09 746-00	I	Y	N
1-MCR-BB-0783	1SNB.M	B 147 35-01 746-00	I	Y	N
1-MCR-BB-0784	1SNB.M	B 147 35-01 746-02	I	Y	N
1-MCR-BB-0786	1SNB.M	B 162 37-01 746-03	I	Y	N
1-MCR-BB-0788	1SNB.M	B 155 39-04 748-00	I	Y	N
1-MCR-BB-0790	1SNB.M	B 151 41-01 746-05	I	Y	N
1-MCR-BB-0792	1SNB.M	B 151 41-01 746-10	I	Y	N
1-MCR-BB-0794	1SNB.M	B 145 37-00 745-10	I	Y	N
1-MCR-BB-0797	1SNB.M	B 155 38-05 748-07	I	Y	N
1-MCR-BB-0798	1SNB.M	B 151 38-03 746-03	I	Y	N
1-MCR-BB-0799	1SNB.M	B 162 37-01 746-08	I	Y	N
1-MCR-BB-0813	1SNB.M	C 189 53-05 732-05	I	Y	N
1-MCR-BB-0814	1SNB.M	C 189 52-09 730-03	I	Y	N
1-MCR-BWI-5040	2SNB.M	D 337 31-03 810-00	I	Y	N
1-MCR-BWI-5050	2SNB.M	C 200 31-03 810-00	I	Y	N
1-MCR-BWI-5060	2SNB.M	B 155 31-03 810-00	I	Y	N
1-MCR-BWI-5070	2SNB.M	A 020 31-03 810-00	I	Y	N
1-MCR-CA- H392	1SNB.M	C 251 21-08 744-10	I	Y	N
1-MCR-CA- H398	1SNB.M	FF50 EL769-06	I	Y	N
1-MCR-CA- H401	1SNB.M	FF51 EL766-09	I	Y	N
1-MCR-CA- H448	1SNB.M	FF47 EL774-04	I	Y	N
1-MCR-CA- H484	1SNB.M	FF46 EL766-09	I	Y	N
1-MCR-CA- H490	2SNB.M	A 024 22-05 773-06	I	Y	N
1-MCR-CA- H514	1SNB.M	B 184 55-06 752-06	I	Y	N
1-MCR-CA- H515	1SNB.M	A 005 55-06 752-06	I	Y	N
1-MCR-CF- H175	1SNB.M	A 070 40-10 773-00	I	Y	N
1-MCR-CFI-5620	2SNB.M	B 145 31-03 750-00	I	Y	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-NM-0716	1SNB.M	B 168 11-06 749-07	I	Y	N
1-MCR-NM-0726	1SNB.M	D 355 22-00 748-02	I	Y	N
1-MCR-NM-0728	1SNB.M	D 355 22-00 748-01	I	Y	N
1-MCR-NM-0729	1SNB.M	D 355 22-00 741-04	I	Y	N
1-MCR-NM-0730	1SNB.M	D 355 32-00 740-05	I	Y	N
1-MCR-NM-0731	2SNB.M	D 355 32-00 740-07	I	Y	N
1-MCR-NM-0732	1SNB.M	D 355 22-01 741-06	I	Y	N
1-MCR-NM-0758	1SNB.M	B 114 45-06 750-00	I	Y	N
1-MCR-NM-0761	1SNB.M	B 114 45-00 750-00	I	Y	N
1-MCR-NM-0762	1SNB.M	B 114 45-09 756-04	I	Y	N
1-MCR-NV-0634	1SNB.M	D 351 56-00 726-09	I	Y	N
1-MCR-NV-0701	1SNB.M	C 187 56-09 729-00	I	Y	N
1-MCR-NV-0720	1SNB.M	C 230 40-01 734-10	I	Y	N
1-MCR-NV-0721	1SNB.M	C 230 47-06 733-00	I	Y	N
1-MCR-NV-0722	1SNB.M	C 230 47-06 733-00	I	Y	N
1-MCR-NV-0723	1SNB.M	C 227 27-08 737-06	I	Y	N
1-MCR-NV-0724	1SNB.M	C 227 27-08 737-09	I	Y	N
1-MCR-NV-0819	1SNB.M	C 216 40-00 737-10	I	Y	N
1-MCR-NV-0874	1SNB.M	C 238 32-05 745-00	I	Y	N
1-MCR-NV-0875	1SNB.M	C 240 32-11 746-02	I	Y	N
1-MCR-NV-0928	1SNB.M	D 315 34-09 745-02	I	Y	N
1-MCR-NV-0929	2SNB.M	D 317 33-00 746-00	I	Y	N
1-MCR-NV-0940	1SNB.M	A 060 35-09 745-02	I	Y	N
1-MCR-NV-0942	1SNB.M	A 061 35-04 746-01	I	Y	N
1-MCR-NV-0946	1SNB.M	B 134 36-09 744-06	I	Y	N
1-MCR-NV-0978	1SNB.M	D 317 32-05 749-03	I	Y	N
1-MCR-NV-1002	1SNB.M	B 108 47-06 734-00	I	Y	N
1-MCR-NV-1003	1SNB.M	B 108 47-06 734-00	I	Y	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-NV-1050	2SNB.M	D 301 40-11 730-00	I	Y	N
1-MCR-NV-1054	1SNB.M	D 301 37-01 740-03	I	Y	N
1-MCR-NV-1062	1SNB.M	B 101 33-09 738-06	I	Y	N
1-MCR-NV-1073	1SNB.M	D 299 40-00 732-06	I	Y	N
1-MCR-NV-1074	1SNB.M	D 299 55-11 732-06	I	Y	N
1-MCR-NV-1079	2SNB.M	B 133 50-05 730-03	I	Y	N
1-MCR-NV-1095	1SNB.M	B 114 47-06 732-10	I	Y	N
1-MCR-NV-1096	1SNB.M	B 114 47-06 732-00	I	Y	N
1-MCR-NV-1202	1SNB.M	B 124 52-00 734-01	I	Y	N
1-MCR-NV-1207	1SNB.M	B 124 55-02 730-03	I	Y	N
1-MCR-NV-1220	1SNB.M	B 157 53-08 731-07	I	Y	N
1-MCR-NV-1230	1SNB.M	C 230 56-00 730-03	I	Y	N
1-MCR-NV-1234	1SNB.M	C 230 49-00 730-03	I	Y	N
1-MCR-NV-1237	1SNB.M	C 230 39-02 733-01	I	Y	N
1-MCR-NV-1238	2SNB.M	C 230 39-02 732-05	I	Y	N
1-MCR-NV-1247	1SNB.M	B 101 50-10 733-04	I	Y	N
1-MCR-NV-1263	1SNB.M	C 186 55-06 729-10	I	Y	N
1-MCR-NV-1290	1SNB.M	D 306 36-10 734-11	I	Y	N
1-MCR-NV-1291	1SNB.M	D 306 36-10 735-01	I	Y	N
1-MCR-NV-1293	1SNB.M	D 306 37-07 731-00	I	Y	N
1-MCR-RN-0670	1SNB.M	B 114 41-00 749-11	I	Y	N
1-MCR-RV-0585	2SNB.M	D 331 55-04 736-02	I	Y	N
1-MCR-RV-0648	1SNB.M	C 261 56-01 825-03	I	N	N
1-MCR-RV-0649	1SNB.M	C 261 55-03 827-06	I	N	N
1-MCR-RV-0685	1SNB.M	C 261 56-01 823-11	I	N	N
1-MCR-RV-0686	1SNB.M	C 258 56-00 826-00	I	N	N
1-MCR-RV-0726	1SNB.M	C 265 56-00 822-01	I	N	N
1-MCR-RV-0727	1SNB.M	C 265 56-00 822-05	I	N	N
1-MCR-RV-0758	1SNB.M	C 265 56-00 825-07	I	N	N
1-MCR-S-KC-119-01-N	1SNM.M	D 244 54-11 742-05	I	N	N
1-MCR-S-KC-120-01-NN	1SNB.M	C 208 54-06 756-09	A	Y	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-S-KC-120-02-NN	1SNB.M	A 089 21-10 734-00	I	Y	N
1-MCR-S-KC-120-02-OO	1SNB.M	D 304 27-04 736-07	I	Y	N
1-MCR-S-KC-121-01-AA	1SNB.M	B 158 57-00 749-06	I	Y	N
1-MCR-S-KC-121-04-BB	1SNB.M	B 091 20-01 734-00	I	Y	N
1-MCR-S-KC-121-04-CC	1SNB.M	D 310 22-09 736-07	I	Y	N
1-MCR-S-NC-112-01-B	1SNB.M	C 248 55-10 744-02	I	Y	N
1-MCR-S-NC-112-01-C	1SNB.M	C 248 56-01 744-02	I	Y	N
1-MCR-S-NC-112-01-D	2SNB.M	C 248 56-06 744-02	I	Y	N
1-MCR-S-NF-100-01-E	1SNB.M	C 232 59-10 815-03	A	N	N
1-MCR-S-NF-100-01-X	1SNB.M	C 250 53-04 814-10	I	N	N
1-MCR-S-NF-101-01-U	1SNB.M	C 250 53-00 822-00	A	N	N
1-MCR-S-NI-100-01-D	1SNB.M	C 214 53-08 749-09	I	Y	N
1-MCR-S-NI-100-04-L	1SNB.M	B 143 48-03 749-06	I	Y	N
1-MCR-S-NI-100-04-Y	1SNB.M	B 151 55-09 730-03	I	Y	N
1-MCR-S-NI-100-07-B	1SNB.M	A 034 53-07 749-09	I	Y	N
1-MCR-S-NI-100-08-T	1SNB.M	D 321 55-09 728-10	I	Y	N
1-MCR-S-NI-100-09-D	1SNB.M	C 240 54-00 729-09	I	Y	N
1-MCR-S-NI-100-09-H	1SNB.M	C 240 54-05 733-02	I	Y	N
1-MCR-S-NI-105-01-T	1SNB.M	C 200 30-09 809-10	A	N	N
1-MCR-S-NI-105-01-U	1SNB.M	C 190 52-00 735-00	I	Y	N
1-MCR-S-NI-105-01-V	1SNB.M	C 190 52-00 734-09	I	Y	N
1-MCR-S-NI-105-02-SS	1SNB.M	A 023 31-08 809-10	A	N	N
1-MCR-S-NI-105-02-TT	1SNB.M	A 023 31-08 809-10	A	N	N
1-MCR-S-NI-105-03-SS	1SNB.M	D 270 30-11 809-10	A	N	N
1-MCR-S-NI-105-03-TT	1SNB.M	D 290 30-11 809-10	A	N	N
1-MCR-S-NI-105-04-Q	1SNB.M	B 156 47-00 809-10	A	N	N
1-MCR-S-NI-100-02-AA	1SNB.M	C 239 52-06 742-06	I	N	N
1-MCR-S-NI-100-08-X	1SNB.M	O 318 45-00 730-03	I	Y	N
1-MCR-S-NI-105-01-W	1SNB.M	C 189 47-00 734-03	I	Y	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-S-NI-105-04-R	1SNB.M	B 156 47-00 809-10	A	N	N
1-MCR-S-NI-105-04-S	1SNB.M	C 187 51-07 731-11	I	Y	N
1-MCR-S-NI-105-04-T	1SNB.M	C 187 50-03 731-08	I	Y	N
1-MCR-S-NM-100-01-R	1SNB.M	C 209 56-00 733-11	I	Y	N
1-MCR-S-RF-100-01-B	2SNB.M	C 242 54-05 746-09	I	Y	N
1-MCR-S-RV-100-01-L	1SNB.M	A 056 46-05 731-10	I	Y	N
1-MCR-S-RV-100-02-B	1SNB.M	A 080 57-00 735-03	I	Y	N
1-MCR-S-RV-100-02-S	1SNB.M	A 080 51-06 740-09	I	N	N
1-MCR-S-RV-101-01-AA	1SNB.M	A 053 52-02 734-00	I	Y	N
1-MCR-S-RV-101-02-J	1SNB.M	B 119 57-00 752-06	I	Y	N
1-MCR-S-SM-100-01-A	1SNB.M	C 200 30-09 809-10	A	N	N
1-MCR-S-VE-101-01-G	1SNB.M	C 215 57-06 777-11	I	N	N
1-MCR-S-VE-101-01-L	1SNB.M	C 215 54-06 761-06	I	Y	N
1-MCR-S-VE-101-01-S	1SNB.M	C 215 57-06 762-09	A	Y	N
1-MCR-S-VE-102-01-F	1SNB.M	C 236 56-08 744-02	I	Y	N
1-MCR-S-VI-100-01-K	1SNB.M	C 261 61-07 797-06	I	N	N
1-MCR-S-VI-100-01-O	1SNB.M	C 258 56-02 799-09	I	N	N
1-MCR-S-VI-100-01-T	1SNB.M	C 262 61-01 763-07	I	N	N
1-MCR-S-VI-100-01-U	1SNB.M	C 262 61-01 760-00	I	N	N
1-MCR-S-VI-100-01-Z	1SNB.M	C 264 61-00 760-00	I	N	N
1-MCR-S-VI-102-02-BB	1SNB.M	B 116 37-08 759-00	I	Y	N
1-MCR-S-VI-102-02-N	1SNB.M	B 116 38-02 759-00	I	Y	N
1-MCR-S-VX-100-01-PP	1SNB.M	C 258 56-09 828-02	I	N	N
1-MCR-S-WL-102-02-K	1SNB.M	A 089 25-04 738-06	I	Y	N
1-MCR-S-WL-103-01-W	1SNB.M	C 249 50-07 726-10	I	Y	N
1-MCR-SM- H001	1SNB.M	A 015 40-09 831-06	I	N	N
1-MCR-SM- H009	1SNB.M	A 009 38-04 760-07	I	Y	N
1-MCR-SM- H079	1SNB.M	C 264 38-04 760-07	I	Y	N
1-MCR-SM- H088	1SNB.M	D 354 37-10 808-01	I	N	N
1-MCR-S-RV-100-01-B	1SNB.M	B 056 46-05 732-10	I	Y	N
1-MCR-S-VI-101-01-E	1SNB.M	A 188 52-09 739-03	I	Y	N
1-MCR-S-VI-102-02-JJ	1SNB.M	A 113 36-10 809-06	A	Y	N
1-MCR-S-WL-104-01-L	1SNB.M	B 120 45-08 756-09	A	Y	N

TABLE 3.7-4b

SAFETY RELATED MECHANICAL SNUBBERS*

PIPE SUPPORT	TYPE/QUAN.	LOCATION	ACCESSIBLE/ INACCESSIBLE	HIGH RADIATION ZONE DURING SHUTDOWN**	ESPECIALLY DIFFICULT TO REMOVE
1-MCR-SM- H089	1SNB.M	D 354 37-11 808-01	I	N	N
1-MCR-SM- H097	1SNB.M	D 354 38-02 760-07	I	Y	N
1-MCR-SM- H154	1SNB.M	B 171 38-04 760-07	I	Y	N
1-MCR-SM- H163	1SNB.M	B 171 38-02 808-00	I	N	N
1-MCR-VI-0502	1SNB.M	B 128 47-06 761-09	A	Y	N
1-MCR-VI-0503	1SNB.M	B 128 47-06 761-09	A	Y	N
1-MCR-VQ-0500	1SNB.M	C 257 55-11 809-09	I	N	N
1-MCR-VQ-0501	1SNB.M	C 258 55-11 811-09	I	N	N
1-MCT-CF- H220	1SNB.M	IG34 EL751-06	A	N	N
1-MCT-CF- H245	1SNB.M	IG32 EL751-06	A	N	N
1-MCT-CF- H246	2SNB.M	IG32 EL747-07	A	N	N
1-MCT-SM- H120	2SNB.M	IE33 EL742-08	A	N	N
2-MCA-NB- 1594	2SNB.M	NN61 EL726-09	I	N	N
2-MCA-NB- H009	2SNB.M	NN61 EL726-09	I	N	N
2-MCA-NB- H078	1SNB.M	QQ56 EL726-00	I	N	N
2-MCA-NB- H103	1SNB.M	NN57 EL741-03	A	N	N
2-MCA-RN- 3014	1SNB.M	FF58 EL724-06	A	N	N
2-MCA-RN- 3022	2SNB.M	FF58 EL722-06	A	N	N

*Snubbers may be added to safety related systems without prior license Amendment to Table 3.7-4b provided that a revision to Table 3.7-4b is included with the next license Amendment request.

**Modifications to this column due to changes in high radiation areas may be without prior License Amendment provided that a revision to Table 3.7-4b is inclded with the next License Amendment request.

3/4.7.9 SEALED SOURCE CONTAMINATION

LIMITING CONDITION FOR OPERATION

3.7.9 Each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material, shall be free of greater than or equal to 0.005 microcuries of removable contamination.

APPLICABILITY: At all times.

ACTION:

a. With a sealed source having removable contamination in excess of the above limits, immediately withdraw the sealed source from use and either:

   1. Decontaminate and repair the sealed source, or

   2. Dispose of the sealed source in accordance with Commission Regulations.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.9.1 Test Requirements - Each sealed source shall be tested for leakage and/or contamination by:

a. The licensee, or

b. Other persons specifically authorized by the Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

4.7.9.2 Test Frequencies - Each category of sealed sources (excluding startup sources and fission detectors previously subjected to core flux) shall be tested at the frequency described below.

a. Sources in use - At least once per six months for all sealed sources containing radioactive materials.

   1. With a half-life greater than 30 days (excluding Hydrogen 3), and

   2. In any form other than gas.

TABLE 3.8-1 (Continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Device Number & Location	Trip Setpoint or Cont. Rating (Amperes)	Response Time (Seconds)	System Powered
3. 600 VAC-Press Htr Pwr Pnls (cont'd)			
Backup Press Htr Pwr Pnl 1D-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 15, 16 & 40
Backup Fuse	90	N/A	
Backup Press Htr Pwr Pnl 1D-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 23, 49 & 50
Backup Fuse	90	N/A	
MCC SMXG-F5A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 28, 55 & 56
Backup Fuse	90	N/A	
Backup Press Htr Pwr Pnl 1D-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 33, 61 & 62
Backup Fuse	90	N/A	
Backup Press Htr Pwr Pnl 1D-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 38, 67 & 68
Backup Fuse	90	N/A	
Backup Press Htr Pwr Pnl 1D-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 43, 73 & 74
Backup Fuse	90	N/A	

TABLE 3.8-1 (Continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Device Number & Location	Trip Setpoint or Cont. Rating (Amperes)	Response Time (Seconds)	System Powered
4. 120 VAC-Panelboards			
1EKVD-12			
Primary Bkr	20	40 @ 60A	Rad Mon Sys Sample Solonoid Vlvs
Backup Fuse	6	N/A	IMISV 5581 & 5583
KRA-22			
Primary Bkr	30	45 @ 90A	Rad Mons IEMF9 & IEMF16
Backup Fuse	1	N/A	

LIQUID HOLDUP TANKS

LIMITING CONDITION FOR OPERATION

3.11.1.4 The quantity of radioactive material contained in each outside temporary tank shall be limited to less than or equal to 10 curies, excluding tritium and dissolved or entrained noble gases.

APPLICABILITY: At all times.

ACTION:

a. With the quantity of radioactive material in any outside temporary tank exceeding the above limit, immediately suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.4 The quantity of radioactive material contained in each of the outside temporary tanks shall be determined to be within the above limit by analyzing a representative sample of the tank's contents at least once per 7 days when radioactive materials are being added to the tank.

CHEMICAL TREATMENT PONDS

LIMITING CONDITION FOR OPERATION

3.11.1.5 The quantity of radioactive material contained in each Chemical Treatment Pond shall be limited by the following expression:

$$\frac{264}{V} \cdot \sum_j \frac{A_j}{C_j} < 1.0$$

excluding tritium and dissolved or entrained noble gases, where,

A_j = pond inventory limit for single radionuclide "j", in curies

C_j = 10 CFR 20, Appendix B, Table II, Column 2, concentration for single radionuclide "j", microcuries/ml

V = design volume of liquid and slurry in the pond, in gallons

264 = conversion unit, microcuries/curie per milliliter/gallon.

APPLICABILITY: At all times.

ACTION:

a. With the quantity of radioactive material in any of the above listed ponds exceeding the above limit, immediately suspend all additions of radioactive material to the pond and within 48 hours reduce the pond contents to within the limit.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.5 The quantity of radioactive material contained in each batch of slurry (used powdex resin) to be transferred to the chemical treatment ponds shall be determined to be within the above limit by analyzing a representative sample of the slurry, and batches to be transferred to the chemical treatment ponds shall be limited by the expression:

$$\sum_j \frac{Q_j}{C_j} < 6.0 \times 10^5 \ \frac{\rho Ci/gm}{\mu Ci/ml}$$

where

Q_j = concentration of radioactive materials in wet, drained slurry (used powdex resin) for radionuclide "j", excluding tritium, dissolved or entrained noble gases, and radionuclides with less than an 8 day half-life. The analysis shall include at least Ce-144, Cs-134, Cs-137, Co-58 and Co-60, in picocuries/gram. Estimates of the Sr-89 and Sr-90 batch concentration shall be included based on the most recent monthly composite analysis (within 3 months).

C_j = 10 CFR 20, Appendix B, Table II, Column 2, concentration for single radionuclide "j", in microcuries/milliliter.

RECORDS

6.5.2.11 Records of NSRB activities shall be prepared, approved and distributed as indicated below:

a. Minutes of each NSRB meeting shall be prepared, approved and forwarded to the Vice President, Steam Production, and to the Senior Vice President, Production and Transmission, within 14 days following each meeting.

b. Reports of reviews encompassed by Section 6.5.2.8 above, shall be prepared, approved and forwarded to the Vice President, Steam Production, and to the Senior Vice President, Production and Transmission, within 14 days following completion of the review.

c. Audit reports encompassed by Section 6.5.2.9 above, shall be forwarded to the Vice President, Steam Production, and to the Senior Vice President, Production and Transmission, and to the management positions responsible for the areas audited within 30 days after completion of the audit.

6.6 REPORTABLE OCCURRENCE ACTION

6.6.1 The following actions shall be taken for REPORTABLE OCCURRENCES:

a. The Commission shall be notified and/or a report submitted pursuant to the requirements of Specification 6.9.

b. Each REPORTABLE OCCURRENCE requiring 24 hour notification to the Commission shall be reviewed by the Station Manager; or by (1) the Operating Superintendent, (2) the Technical Services Superintendent, or (3) the Maintenance Superintendent, as previously designated by the Station Manager; and submitted to the NSRB and the Vice President, Steam Production.

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

a. The unit shall be placed in at least HOT STANDBY within one hour.

b. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within one hour. The Vice President, Steam Production, and the NSRB shall be notified within 24 hours.

SAFETY LIMIT VIOLATION (Continued)

c. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the Operating Superintendent and the Station Manager. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems or structures, and (3) corrective action taken to prevent recurrence.

d. The Safety Limit Violation Report shall be submitted to the Commission, the NSRB and the Vice President, Steam Production, within 14 days of the violation.

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978.

b. Refueling operations.

c. Surveillance and test activities of safety related equipment.

d. Security Plan implementation.

e. Emergency Plan implementation.

f. Fire Protection Program implementation.

g. PROCESS CONTROL PROGRAM implementation.

h. OFFSITE DOSE CALCULATION MANUAL implementation.

i. Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 4.15, December 1977.

6.8.2 Each procedure of 6.8.1 above, and changes thereto, shall be reviewed and approved by the Station Manager; or by (1) the Operating Superintendent, (2) the Technical Services Superintendent, or (3) the Maintenance Superintendent, as previously designated by the Station Manager; prior to implementation and shall be reviewed periodically as set forth in administrative procedures.

6.8.3 Temporary changes to procedures of 6.8.1 above may be made provided:

a. The intent of the original procedure is not altered.

PROCEDURES AND PROGRAMS (Continued)

b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.

c. The change is documented, reviewed and approved by the Station Manager; or by (1) the Operating Superintendent, (2) the Technical Services Superintendent, or (3) the Maintenance Superintendent, as previously designated by the Station Manager; within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, and maintained:

a. Primary Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include residual heat removal, boron recycle, refueling water, liquid waste, waste gas, containment spray, safety injection, chemical and volume control, and nuclear sampling. The program shall include the following:

(i) Preventive maintenance and periodic visual inspection requirements, and

(ii) Integrated leak rate test requirements for each system at refueling cycle intervals or less.

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

(i) Training of personnel,

(ii) Procedures for monitoring, and

(iii) Provisions for maintenance of sampling and analysis equipment.

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation. This program shall include:

(i) Identification of a sampling schedule for the critical variables and control points for these variables,

PROCEDURES AND PROGRAMS (Continued)

(ii) Identification of the procedures used to measure the values of the critical variables,

(iii) Identification of process sampling points, including the discharge of the condenser hot well pump,

(iv) Procedures for the recording and management of data,

(v) Procedures defining corrective actions for off-control point chemistry conditions, including procedures for limiting plant operation under transient off-control chemistry conditions of feedwater and steam generator blowdown to < 100 hours, < 24 hours, or < 2 hours for progressively severe out-of-limit secondary water chemistry, and

(vi) A procedure identifying (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective action.

d. Backup Method for Determining Subcooling Margin

A program which will ensure the capability to accurately monitor the Reactor Coolant System subcooling margin. This program shall include the following:

(i) Training of personnel, and

(ii) Procedures for monitoring.

e. Postaccident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

(i) Training of personnel,

(ii) Procedures for sampling and analysis,

(iii) Provisions for maintenance of sampling and analysis equipment.

Special Test Program

For conducting the special low power test program as described in Section I.G.1 of the Safety Evaluation Report related to the operation of the McGuire Nuclear Station, Supplement Number 4 dated January 1981, the Technical specifications may be excepted as follows: (Test numbers refer to those specified in William O. Parker's letter of October 10, 1981 to Harold R. Denton/ Appendix E "McGuire Nuclear Station - Response to TMI concerns"):

		Test					
	Technical Specifications	1	2	3	4	5	6
2.1.1	Core Safety Limits	X	X	X	X	X	
2.2.1	Various Reactor Trips						
	Overtemperature ΔT	X	X	X	X	X	X
	Overpower ΔT	X	X	X	X	X	X
	Steam Generator Level	X	X	X	X	X	X
3.1.1.3	Moderator Temperature Coefficient					X	
3.1.1.4	Minimum Temperature for Criticality					X	
3.3.1	Various Reactor Trips						
	Overtemperature ΔT	X	X	X	X	X	X
	Overpower ΔT	X	X	X	X	X	X
	Steam Generator Level	X	X	X	X	X	X
3.3.2	Safety Injection - All automatic functions	X	X	X	X	X	X
	Auxiliary feedwater automatic start	X	X	X	X	X	X
3.4.4	Pressurizer		X	X			X
3.7.1.2	Auxiliary Feedwater				X		X
3.8.1.1	AC Power Sources				X		X
3.8.2.1	AC Onsite Power Distribution System				X		X
8.3.2.3	DC Distribution System				X		X
3.10.3	Special Test Exceptions - Physics Test					X	

SAFETY EVALUATION BY THE

OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 7

TO LICENSE NPF-9

DUKE POWER COMPANY

INTRODUCTION

By letter dated August 12, 1981, the licensee requested certain revisions to the McGuire Nuclear Station Unit 1 Technical Specifications, Appendix A, to License NPF-9. These revisions are:

1. Revised setpoints and surveillance requirements to selected Engineered Safety Features Actuation System instrumentation.

2. Correction to the measurement range of the Unit Vent Noble Gas Effluent Monitor.

3. Revised surveillance requirements for certain fire detection instrumentation.

4. Revised surveillance requirements for hydrogen monitors.

5. Revision to listings of hydraulic and mechanical snubbers.

6. Revised response time and test current value for a circuit breaker.

7. Revised surveillance requirements for monitoring Chemical Treatment Pond radionuclide inventory.

8. Clarification to Special Test Program exceptions.

In addition the licensee noted a printing error on pages 6-12 and 6-13.

EVALUATION

The McGuire Nuclear Station utilizes the standard Westinghouse-PWR Technical Specifications which have been developed to reflect the McGuire design. The following discussion refers to the revisions summarized above.

1. The intent of the technical Specification requirement for RWST low level at Westinghouse plants is to insure that automatic switchover to recirculation will be initiated when the low level setpoint is

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reached. The current Technical Specification setpoint of ≥ 120 inches initiates a status alarm provided to alert the operator of a specific plant condition so that manual actions may be initiated if determined to be necessary. Refer to item 10(a) in Table 3.3-3, 3.3-4 and 3.3-5. The proposed setpoint of ≥ 90 inches corresponds to the point where automatic switchover occurs, and thus is the setpoint for which a Technical Specification requirement is appropriate.

Automatic switchover to recirculation at McGuire Unit 1 should occur with a minimum of 73,431 usable gallons of RWST volume remaining. This corresponds to a setting of 80 inches which we find to be acceptable. The licensee has stated that the proposed setpoint of ≥ 90 inches includes sufficient margin (10 inches) to account for the effects of instrument drift and instrument inaccuracies. Based on our review and discussion with the licensee, we conclude that the revision is acceptable.

NOTE: That portion of the licensee's request regarding item 7(f) of Table 3.3-3, Auxiliary Feedwater Suction Pressure, was addressed in Amendment No. 3 to NPF-9, August 28, 1981.

2. As a result of a TMI Action Plan requirement the range of the noble gas effluent monitor on the unit vent was extended to 10^0 - 10^8 rad/hr. An editorial oversight resulted in entering an incorrect measurement range in Table 3.3-6. This oversight has been corrected.

3. The proposed change to the fire detection instrumentation specification 4.3.3.7.1 is to revise the surveillance requirement for fixed temperature/rate-of-rise fire detectors. The surveillance requirement would retain the same test procedure and frequency contained in the standard Technical Specifications. However, the number of detectors would be based on a sample because the surveillance test requirement is a destructive test. Strict compliance to the standard Technical Specifications would require replacement of all of the fire detectors affected every six months.

   The licensee's request for a fire detection system surveillance change is based on the fixed temperature/rate-of-rise detectors being destroyed as a result of the surveillance test. The proposed change incorporates a sampling procedure wherein two non-restorable detectors are selected out of every hundred or fraction thereof, and removed every five years for testing at an independent laboratory. If a failure does occur, then two additional detectors are removed for testing. This surveillance

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procedure is consistent with the specifications in the National Fire Protection Association (NFPA) Code 72E, "Standard On Automatic Fire Detectors."

Based on our review of the proposed change and of the NFPA Standard No 72E we conclude the surveillance change is acceptable.

4. The intent of the Technical Specification surveillance requirement for hydrogen monitors (4.6.4.1) is to assure operability of the monitor. A channel calibration using a sample gas demonstrates the required operability. The proposed revision provides clarification involving only a change in specific details of the channel calibration.

   Based on our review, we conclude that the revision is acceptable.

5. The proposed review consists of correction of typographical errors, addition or deletion of snubbers and in general updating tabular information in Table 3.7-4a and 4b.

   Based on our review and requirment that the technical specification conform with the as-installed plant equipment, we conclude that the revision is acceptable.

6. The proposed review consists of corrections in Table 3.8-1 to reflect the as-installed KRA-22 primary breaker.

   Based on our review and requirement that the technical specification conform with the as-installed plant equipment, we conclude that the revision is acceptable.

7. The proposed revision to surveillance specification 4.11.1.5 consists of editing and clarification of sampling and analysis methodolgy. The revision does not involve a change to the maximum amount or type of radioactivity permitted in the Chemical Treatment Pond.

   Based on our review we conclude that the revision is acceptable.

8. The licensee notes that the special test numbers appearing in specification 7.0 do not reflect the Safety Evaluation Report Supplement No. 4 but rather a more recent October 10, 1981 document. This is an editorial and clarification change and we find it acceptable.

   As a result of an administration error, pages 6-12 and 6-13 were issued containing the same sections with different requirements. Pages 6-12 and 6-13 are reissued to correct this error.

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ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR Section 51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the consideration discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: October 27, 1981

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UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-369

DUKE POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT

FACILITY OPERATING LICENSE NO. NPF-9

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 7 to Facility Operating License No. NPF-9, issued to Duke Power Company (licensee) for the McGuire Nuclear Station, Unit 1 (the facility) located in Mecklenburg County, North Carolina. This amendment revises setpoints to selected Engineered Safety Features Actuation System instrumentation, makes corrections to the measurement range of the Unit Vent Noble Gas Effluent Monitor, revises surveillance requirements for certain fire detection instrumentation and hydrogen monitors, revises listings of hydraulic and mechanical snubbers, revises response time and test current value for a circuit breaker, revises surveillance requirements for monitoring Chemical Treatment Pond radionuclide inventory, and clarifies Special Test Program exceptions. The amendment is effective as of its date of issuance.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

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For further details with respect to this action, see (1) Duke Power Company letter dated August 12, 1981, (2) Amendment No. 7 to Facility Operating License No. NPF-9 with Appendix A Technical Specification page changes, and (3) the Commission's related Safety Evaluation.

All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C., and the Atkins Library, University of North Carolina, Charlotte (UNCC Station), North Carolina 28223. A copy of items 2 and 3 may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 27th day of October 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

S/

Elinor G. Adensam, Chief
Licensing Branch No. 4
Division of Licensing, NRR

w/ Amendment & F.R.N. only.
E.K. note comment, p. 1 of notice

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SURNAME	MDuncan/hmc	RBirkel	KETCHEN	EAdensam			
DATE	10/8/81	10/13/81	10/27/81	10/20/81			

October 27, 1981

AMENDMENT NO. 7 TO
FACILITY OPERATING LICENSE NPF-9 - McGUIRE NUCLEAR STATION, UNIT NO. 1

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