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May 15, 2003

U.S. Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555-0001

Subject: Duke Energy Corporation (DEC)
McGuire Nuclear Station Units 1 and 2
Docket Numbers 50-369 and 50-370
Spent Fuel Storage Poison Inserts (RackSavers)
Draft Technical Specifications

In preparation for the upcoming May 20, 2003 meeting between DEC and the NRC to discuss the use of RackSavers as a neutron poison insert in the Spent Fuel Pools (SFP), DEC has developed the attached "Limiting Conditions of Operation (LCO)" for "Spent Fuel Assembly Storage" and "RackSaver Insert". These LCOs are considered preliminary and their sole purpose is to facilitate examination and discussion during the upcoming meeting. Please realize that the attached package represents only a small sample of the tables and figures to be contained in the final technical specifications for "Spent Fuel Assembly Storage". Be aware that these LCOs have not been processed via DEC's internal review processes, such as PORC and NSRB. If you have any questions with respect to this matter, please contact Norman T. Simms of Regulatory Compliance at 704-875-4685.

Very truly yours,

D. M. Jamil

Attachment

A001

xc:

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ATTACHMENT

3.7 PLANT SYSTEMS

3.7.15 Spent Fuel Assembly Storage

LCO 3.7.15 The combination of initial enrichment, burnup and cooling time of each new or spent fuel assembly stored in the spent fuel pool storage racks shall be within the following configurations:

a. New or irradiated fuel may be allowed for unrestricted storage in **Region 1** of the spent fuel pool provided the maximum initial U-235 enrichment of the fuel is $\leq$ 5.0 weight percent; or

b. New or irradiated fuel which has decayed at least 16 days may be stored in **Region 2A** of the spent fuel pool provided that a RackSaver Insert is located on the southeast corner of the fuel assembly stored in the cell and that it is in accordance with these limits:

1. Unrestricted storage of fuel meeting the criteria of Table 3.7.15-1; or

2. Checkerboard storage in accordance with Figure 3.7.15-1 of fuel which does not meet the criteria of Table 3.7.15-1; or

c. New or irradiated fuel which has decayed at least 16 days may be stored in **Region 2B** of the spent fuel pool without a RackSaver Insert and that it is in accordance with these limits:

1. Unrestricted storage of fuel meeting the criteria of Table 3.7.15-2; or

2. Restricted storage in accordance with Figure 3.7.15-2 of fuel meeting the criteria of Table 3.7.15-3 (Restricted Fuel assembly) and Table 3.7.15-4 (Filler Fuel assembly); or

3. Checkerboard storage in accordance with Figure 3.7.15-3 of fuel meeting the criteria of Table 3.7.15-5.

APPLICABILITY: Whenever any fuel assembly is stored in the spent fuel pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	A.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Initiate action to move the non-complying fuel assembly to the correct location.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.15.1	Verify by administrative means the planned spent fuel pool location is acceptable for the fuel assembly being stored.	Prior to storing the fuel assembly in the spent fuel pool

DRAFT

Table 3.7.15-2 (page 1 of 3)

Minimum Qualifying Burnup Versus Initial Enrichment
for Unrestricted Region 2B Storage of Fuel without RackSavers

FUEL TYPE ALPHA

Initial nominal enrichment (% U-235)	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Cooling Time (Years)	Assembly Burnup (GWD/MTU)						
0	22.71	30.11	37.38	44.27	51.04	57.87	63.95
5	19.28	26.62	32.81	39.27	45.32	51.42	57.23
10	16.51	24.43	30.48	36.56	42.35	48.12	53.77
15	14.91	23.05	29.46	34.93	40.56	46.18	51.70
20	13.86	22.20	28.53	33.84	39.37	44.91	50.34

FUEL TYPE BRAVO

Initial nominal enrichment (% U-235)	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Cooling Time (Years)	Assembly Burnup (GWD/MTU)						
0	0	30.57	36.79	43.25	49.28	54.99	60.42
5	0	27.89	32.30	37.85	43.57	48.68	53.67
10	0	25.34	29.83	35.21	40.62	45.48	50.21
15	0	23.84	28.33	33.60	38.76	43.58	48.18
20	0	22.86	28.91	32.53	37.63	42.35	46.84

FUEL TYPE CHARLIE

Initial nominal enrichment (% U-235)	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Cooling Time (Years)	Assembly Burnup (GWD/MTU)						
0	0	0	38.20	44.78	50.59	56.27	61.50
5	0	0	33.66	38.98	44.63	49.63	54.51
10	0	0	31.23	36.31	41.56	46.28	50.94
15	0	0	29.70	34.67	39.53	44.31	48.82
20	0	0	28.70	33.58	38.37	43.04	47.44

Minimum Qualifying Burnup Versus Initial Enrichment
for Unrestricted Region 2B Storage of Fuel without RackSavers

FUEL TYPE DELTA

Initial nominal enrichment (% U-235)	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Cooling Time (Years)	Assembly Burnup (GWD/MTU)						
0	20.42	29.22	36.56	44.02	51.16	58.39	64.66
5	18.34	25.51	32.11	38.98	45.55	51.99	57.99
10	16.77	23.55	30.61	36.36	42.62	48.70	54.55
15	15.88	22.38	29.23	34.77	40.87	46.7	52.50
20	15.31	21.61	28.33	33.71	39.70	45.48	51.15

FUEL TYPE ECHO

Initial nominal enrichment (% U-235)	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Cooling Time (Years)	Assembly Burnup (GWD/MTU)						
0	20.64	28.61	35.16	41.49	0	0	0
5	17.77	25.14	31.16	37.48	0	0	0
10	16.27	23.25	29.80	35.08	0	0	0
15	15.43	22.12	28.48	33.60	0	0	0
20	14.90	21.38	27.61	32.63	0	0	0

FUEL TYPE FOXTROT

Initial nominal enrichment (% U-235)	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Cooling Time (Years)	Assembly Burnup (GWD/MTU)						
0	18.53	26.55	33.91	40.52	47.28	53.86	60.28
5	16.18	23.58	30.25	36.80	42.54	48.59	51.51
10	14.91	22.02	28.56	34.59	40.05	45.85	51.51
15	14.10	21.03	27.39	33.23	39.06	44.17	49.69
20	13.59	20.83	26.62	32.29	38.04	43.06	48.50

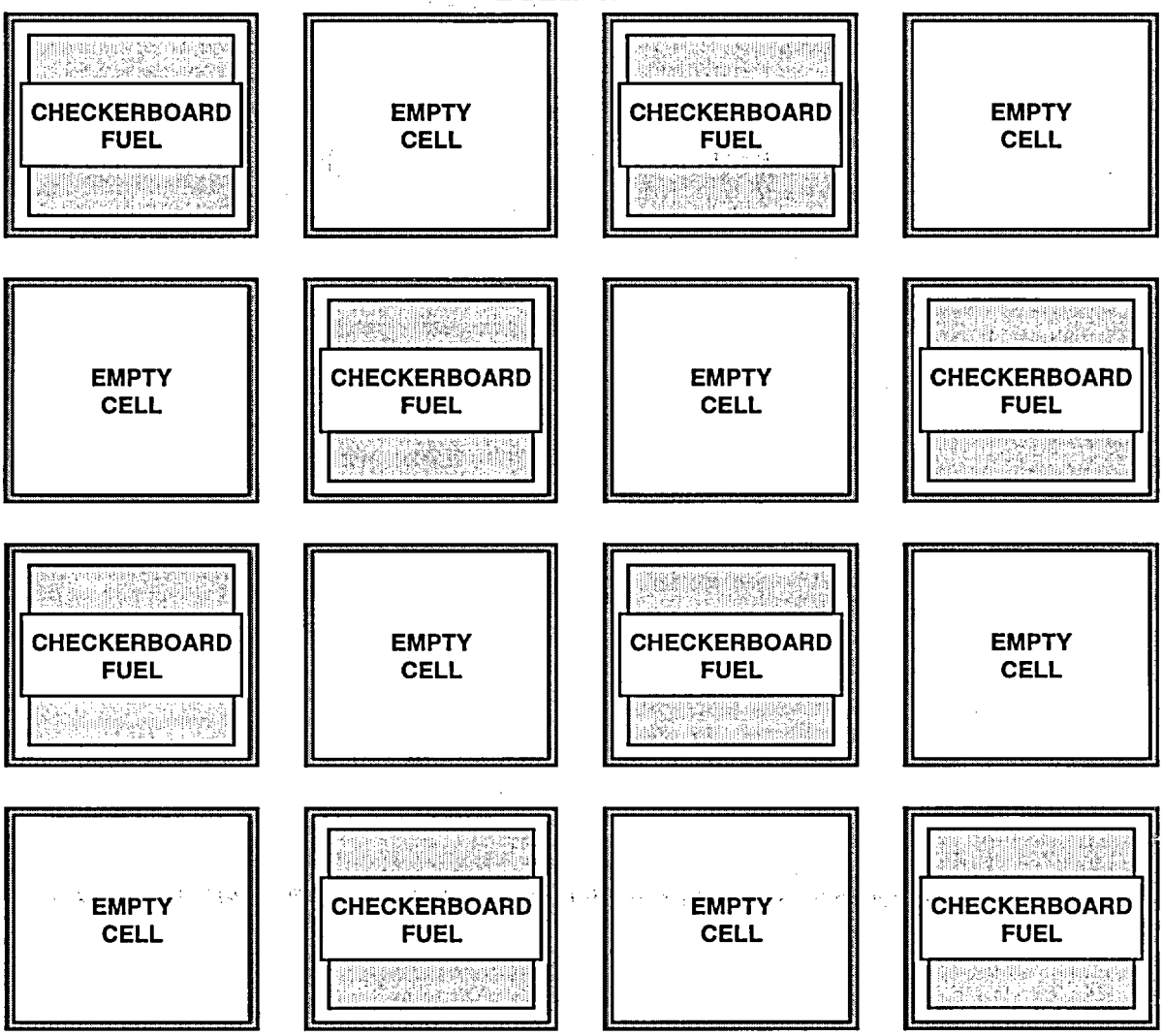
Minimum Qualifying Burnup Versus Initial Enrichment
for Unrestricted Region 2B Storage of Fuel without RackSavers

FUEL TYPE GOLF

Initial nominal enrichment (% U-235)	2.00	2.50	3.00	3.50	4.00	4.50	5.00
Cooling Time (Years)	Assembly Burnup (GWD/MTU)						
0	0	0	36.17	42.76	48.60	54.25	59.66
5	0	0	31.77	37.23	42.85	47.94	52.89
10	0	0	29.26	34.66	39.62	44.75	49.46
15	0	0	27.79	33.10	37.93	42.89	47.44
20	0	0	28.27	32.08	36.83	41.67	46.14

NOTES:

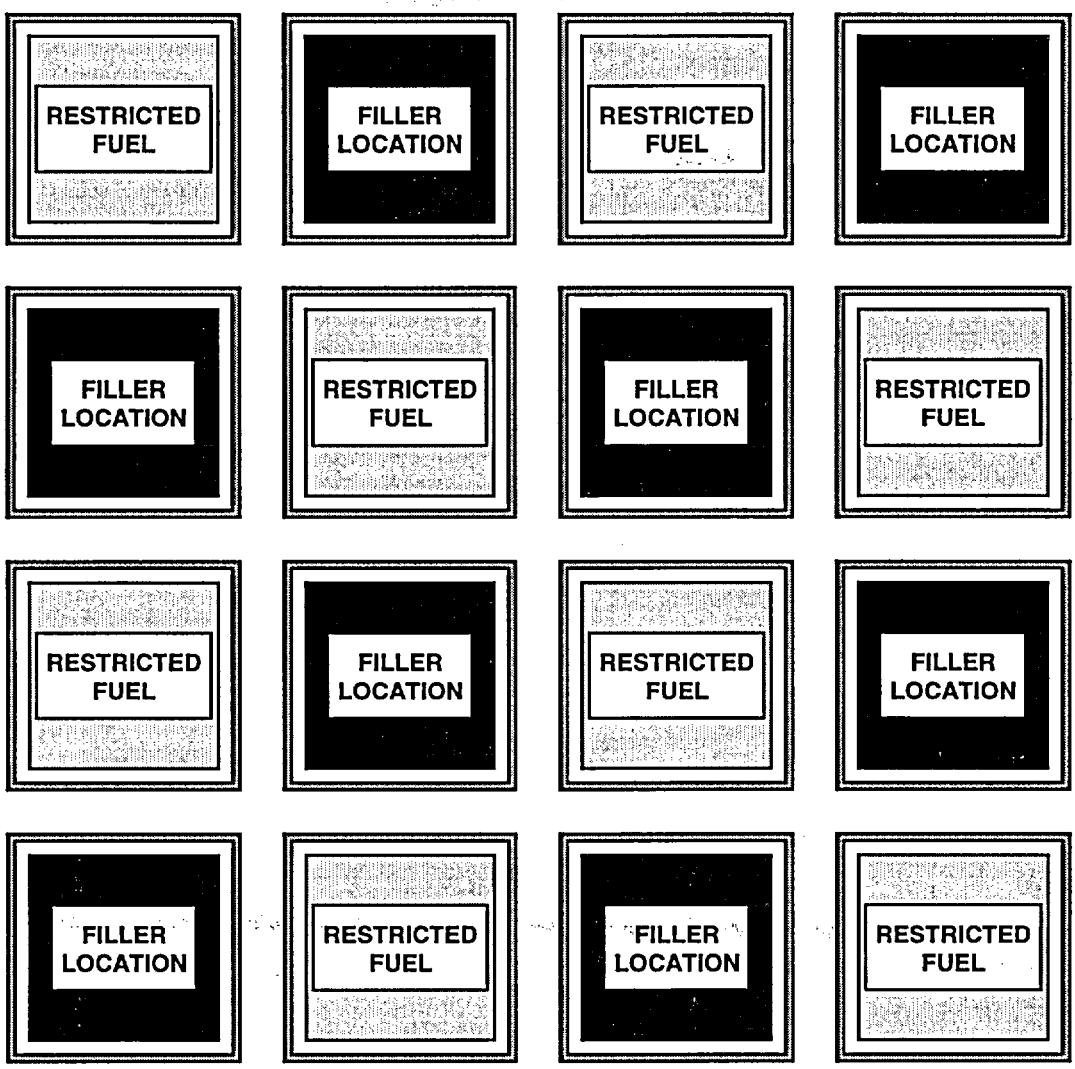
Fuel which differs from those designs used to determine the requirements of Table 3.7.15-2 may be qualified for Unrestricted Region 2B storage by means of an analysis using NRC approved methodology to assure that k_{eff} is less than 1.0 with no boron and less than or equal to 0.95 with credit for soluble boron. Likewise, previously unanalyzed fuel up to a nominal 5.00 weight% U-235 may be qualified for Restricted Region 2B storage by means of an analysis using NRC approved methodology to assure that k_{eff} is less than 1.0 with no boron and less than or equal to 0.95 with credit for soluble boron.



Checkerboard Fuel: Fuel which does not meet the minimum burnup requirements of Table 3.7.15-1. (Fuel which does meet the requirements of Table 3.7.15-1, or non-fuel components, or an empty location may be placed in checkerboard fuel locations as needed)

Boundary Condition: At least three of the four faces of each Checkerboard Fuel Assembly must be adjacent to an empty cell or a pool wall, at all boundaries between storage regions.

Figure 3.7.15-1 (page 1 of 1)
Required 2 out of 4 Fuel Loading Pattern for Region 2A Checkerboard Storage of Fuel with RackSaver Inserts



Restricted Fuel: Fuel which meets the minimum burnup requirements of Table 3.7.15-3, or non-fuel components, or an empty location.

Filler Location: Either fuel which meets the minimum burnup requirements of Table 3.7.15-4, or an empty cell.

Boundary Condition: At least three of the four faces of each 2B Restricted Fuel Assembly must be adjacent to a 2B Filler Location, an empty cell, or the pool wall, at all boundaries between storage regions.

Figure 3.7.15-2 (page 1 of 1)
Required 2 out of 4 Fuel Loading Pattern for Region 2B Restricted Storage of Fuel without RackSaver Inserts

3.7 PLANT SYSTEMS

3.7.17 RackSaver Insert

LCO 3.7.17 Only one required RackSaver Insert can be absent from fuel assemblies stored in **Region 2A** at any one time

APPLICABILITY: Whenever a fuel assembly that requires a RackSaver Insert per LCO 3.7.15 is being moved in the spent fuel pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. More than one required RackSaver insert absent.	A.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Initiate action to re-install required RackSaver Insert(s).	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.17.1	Verify by administrative means that the spent fuel pool boron concentration is within the limit specified in the COLR per SR 3.7.14.1.	Within 12 hours prior to removing a required RackSaver Insert