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October 29, 2001

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Duke Energy Corporation
McGuire Nuclear Station Units 1 and 2
Docket Nos. 50-369 and 50-370
Technical Specification (TS) Bases Revision

Attached is a revision to the McGuire TS Bases Manual Section 3.6.3, Containment Isolation Valves. Reference number 5 in TS Bases 3.6.3 was changed from "Standard Review Plan 6.2.4" to "UFSAR Section 6.2.4.2". Both references include the requirements for a closed system of the containment isolation system; however, the UFSAR is a more readily-available document. This change is made consistent with requirements of TS 5.5.14, TS Bases Control Program.

Attachment 1 contains the revised TS List of Effective Pages and Bases List of Effective Sections. Attachment 2 contains revised TS Bases 3.6.3.

Please contact P.T. Vu at (704) 875-4302 if you have any questions.

Very truly yours,

H. B. Barron

Attachments

A001

U. S. Nuclear Regulatory Commission
October 29, 2001
Page 2

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U. S. Nuclear Regulatory Commission
October 29, 2001
Page 3

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M. Wilder (EC050)
ELL (EC05O)
K. Crane
McGuire Master File 1.3.2.12

ATTACHMENT 1

**REVISED TECHNICAL SPECIFICATION LIST OF EFFECTIVE PAGES
AND
BASES LIST OF EFFECTIVE SECTIONS**

McGuire Nuclear Station Technical Specifications
List of Effective Pages and Bases List of Effective Sections

Page Number	Amendment	Revision Date
i	184/166	9/30/98
ii	184/166	9/30/98
iii	184/166	9/30/98
iv	184/166	9/30/98
1.1-1	184/166	9/30/98
1.1-2	184/166	9/30/98
1.1-3	184/166	9/30/98
1.1-4	194/175	9/18/00
1.1-5	194/175	9/18/00
1.1-6	194/175	9/18/00
1.1-7	194/175	9/18/00
1.2-1	184/166	9/30/98
1.2-2	184/166	9/30/98
1.2-3	184/166	9/30/98
1.3-1	184/166	9/30/98
1.3-2	184/166	9/30/98
1.3-3	184/166	9/30/98
1.3-4	184/166	9/30/98
1.3-5	184/166	9/30/98
1.3-6	184/166	9/30/98
1.3-7	184/166	9/30/98
1.3-8	184/166	9/30/98
1.3-9	184/166	9/30/98
1.3-10	184/166	9/30/98
1.3-11	184/166	9/30/98
1.3-12	184/166	9/30/98
1.3-13	184/166	9/30/98
1.4-1	184/166	9/30/98
1.4-2	184/166	9/30/98
1.4-3	184/166	9/30/98
1.4-4	184/166	9/30/98

Page Number	Amendment	Revision Date
2.0-1	184/166	9/30/98
2.0-2	191/172	3/20/00
3.0-1	184/166	9/30/98
3.0-2	184/166	9/30/98
3.0-3	184/166	9/30/98
3.0-4	184/166	9/30/98
3.0-5	184/166	9/30/98
3.1.1-1	184/166	9/30/98
3.1.2-1	184/166	9/30/98
3.1.2-2	184/166	9/30/98
3.1.3-1	184/166	9/30/98
3.1.3-2	184/166	9/30/98
3.1.3-3	184/166	9/30/98
3.1.4-1	184/166	9/30/98
3.1.4-2	184/166	9/30/98
3.1.4-3	184/166	9/30/98
3.1.4-4	186/167	9/8/99
3.1.5-1	184/166	9/30/98
3.1.5-2	184/166	9/30/98
3.1.6-1	184/166	9/30/98
3.1.6-2	184/166	9/30/98
3.1.6-3	184/166	9/30/98
3.1.7-1	184/166	9/30/98
3.1.7-2	184/166	9/30/98
3.1.8-1	184/166	9/30/98
3.1.8-2	184/166	9/30/98
3.2.1-1	184/166	9/30/98
3.2.1-2	184/166	9/30/98
3.2.1-3	184/166	9/30/98
3.2.1-4	188/169	9/22/99
3.2.1-5	188/169	9/22/99
3.2.2-1	184/166	9/30/98
3.2.2-2	184/166	9/30/98

Page Number	Amendment	Revision Date
3.2.2-3	184/166	9/30/98
3.2.2-4	188/169	9/22/99
3.2.3-1	184/166	9/30/98
3.2.4-1	184/166	9/30/98
3.2.4-2	184/166	9/30/98
3.2.4-3	184/166	9/30/98
3.2.4-4	184/166	9/30/98
3.3.1-1	184/166	9/30/98
3.3.1-2	184/166	9/30/98
3.3.1-3	184/166	9/30/98
3.3.1-4	184/166	9/30/98
3.3.1-5	184/166	9/30/98
3.3.1-6	184/166	9/30/98
3.3.1-7	184/166	9/30/98
3.3.1-8	184/166	9/30/98
3.3.1-9	184/166	9/30/98
3.3.1-10	184/166	9/30/98
3.3.1-11	184/166	9/30/98
3.3.1-12	184/166	9/30/98
3.3.1-13	184/166	9/30/98
3.3.1-14	194/175	9/18/00
3.3.1-15	194/175	9/18/00
3.3.1-16	194/175	9/18/00
3.3.1-17	194/175	9/18/00
3.3.1-18	194/175	9/18/00
3.3.1-19	194/175	9/18/00
3.3.1-20	184/166	9/30/98
3.3.2-1	184/166	9/30/98
3.3.2-2	184/166	9/30/98
3.3.2-3	184/166	9/30/98
3.3.2-4	184/166	9/30/98
3.3.2-5	184/166	9/30/98
3.3.2-6	184/166	9/30/98

Page Number	Amendment	Revision Date
3.3.2-7	184/166	9/30/98
3.3.2-8	184/166	9/30/98
3.3.2-9	184/166	9/30/98
3.3.2-10	194/175	9/18/00
3.3.2-11	194/175	9/18/00
3.3.2-12	194/175	9/18/00
3.3.2-13	194/175	9/18/00
3.3.2-14	194/175	9/18/00
3.3.2-15	184/166	9/30/98
3.3.3-1	184/166	9/30/98
3.3.3-2	184/166	9/30/98
3.3.3-3	184/166	9/30/98
3.3.3-4	184/166	9/30/98
3.3.4-1	184/166	9/30/98
3.3.4-2	184/166	9/30/98
3.3.4-3	184/166	9/30/98
3.3.5-1	184/166	9/30/98
3.3.5-2	194/175	9/18/00
3.3.6-1	184/166	9/30/98
3.3.6-2	184/166	9/30/98
3.3.6-3	194/175	9/18/00
3.4.1-1	191/172	3/20/00
3.4.1-2	191/175	3/20/00
3.4.1-3	184/166	9/30/98
3.4.1-4	191/172	3/20/00
3.4.2-1	184/166	9/30/98
3.4.3-1	184/166	9/30/98
3.4.3-2	184/166	9/30/98
3.4.3-3	184/166	9/30/98
3.4.3-4	184/166	9/30/98
3.4.3-5	184/166	9/30/98
3.4.3-6	184/166	9/30/98
3.4.4-1	184/166	9/30/98

Page Number	Amendment	Revision Date
3.4.5-1	184/166	9/30/98
3.4.5-2	184/166	9/30/98
3.4.5-3	184/166	9/30/98
3.4.6-1	184/166	9/30/98
3.4.6-2	184/166	9/30/98
3.4.7-1	184/166	9/30/98
3.4.7-2	184/166	9/30/98
3.4.8-1	184/166	9/30/98
3.4.8-2	184/166	9/30/98
3.4.9-1	184/166	9/30/98
3.4.9-2	184/166	9/30/98
3.4.10-1	184/166	9/30/98
3.4.10-2	184/166	9/30/98
3.4.11-1	184/166	9/30/98
3.4.11-2	184/166	9/30/98
3.4.11-3	184/166	9/30/98
3.4.11-4	184/166	9/30/98
3.4.12-1	184/166	9/30/98
3.4.12-2	184/166	9/30/98
3.4.12-3	184/166	9/30/98
3.4.12-4	184/166	9/30/98
3.4.12-5	184/166	9/30/98
3.4.12-6	184/166	9/30/98
3.4.13-1	184/166	9/30/98
3.4.13-2	184/166	9/30/98
3.4.14-1	184/166	9/30/98
3.4.14-2	184/166	9/30/98
3.4.14-3	184/166	9/30/98
3.4.14-4	184/166	9/30/98
3.4.15-1	184/166	9/30/98
3.4.15-2	184/166	9/30/98
3.4.15-3	184/166	9/30/98
3.4.16-1	184/166	9/30/98

Page Number	Amendment	Revision Date
3.4.16-2	184/166	9/30/98
3.4.16-3	184/166	9/30/98
3.4.16-4	184/166	9/30/98
3.4.17-1	184/166	9/30/98
3.5.1-1	184/166	9/30/98
3.5.1-2	184/166	9/30/98
3.5.2-1	184/166	9/30/98
3.5.2-2	184/166	9/30/98
3.5.2-3	184/166	9/30/98
3.5.3-1	184/166	9/30/98
3.5.3-2	184/166	9/30/98
3.5.4-1	184/166	9/30/98
3.5.4-2	184/166	9/30/98
3.5.5-1	184/166	9/30/98
3.5.5-2	184/166	9/30/98
3.6.1-1	184/166	9/30/98
3.6.1-2	184/166	9/30/98
3.6.2-1	184/166	9/30/98
3.6.2-2	184/166	9/30/98
3.6.2-3	184/166	9/30/98
3.6.2-4	184/166	9/30/98
3.6.2-5	184/166	9/30/98
3.6.3-1	184/166	9/30/98
3.6.3-2	184/166	9/30/98
3.6.3-3	184/166	9/30/98
3.6.3-4	184/166	9/30/98
3.6.3-5	184/166	9/30/98
3.6.3-6	184/166	9/30/98
3.6.3-7	184/166	9/30/98
3.6.4-1	184/166	9/30/98
3.6.5-1	184/166	9/30/98
3.6.5-2	184/166	9/30/98
3.6.6-1	184/166	9/30/98

Page Number	Amendment	Revision Date
3.6.6-2	184/166	9/30/98
3.6.7-1	184/166	9/30/98
3.6.7-2	184/166	9/30/98
3.6.8-1	184/166	9/30/98
3.6.8-2	184/166	9/30/98
3.6.9-1	184/166	9/30/98
3.6.9-2	184/166	9/30/98
3.6.10-1	184/166	9/30/98
3.6.10-2	184/166	9/30/98
3.6.11-1	184/166	9/30/98
3.6.11-2	184/166	9/30/98
3.6.12-1	184/166	9/30/98
3.6.12-2	184/166	9/30/98
3.6.12-3	184/166	9/30/98
3.6.13-1	184/166	9/30/98
3.6.13-2	184/166	9/30/98
3.6.13-3	184/166	9/30/98
3.6.14-1	184/166	9/30/98
3.6.14-2	184/166	9/30/98
3.6.14-3	184/166	9/30/98
3.6.15-1	184/166	9/30/98
3.6.15-2	184/166	9/30/98
3.6.16-1	184/166	9/30/98
3.6.16-2	184/166	9/30/98
3.7.1-1	184/166	9/30/98
3.7.1-2	184/166	9/30/98
3.7.1-3	184/166	9/30/98
3.7.2-1	184/166	9/30/98
3.7.2-2	184/166	9/30/98
3.7.3-1	184/166	9/30/98
3.7.3-2	184/166	9/30/98
3.7.4-1	184/166	9/30/98
3.7.4-2	184/166	9/30/98

Page Number	Amendment	Revision Date
3.7.5-1	184/166	9/30/98
3.7.5-2	184/166	9/30/98
3.7.5-3	184/166	9/30/98
3.7.5-4	184/166	9/30/98
3.7.6-1	184/166	9/30/98
3.7.6-2	184/166	9/30/98
3.7.7-1	184/166	9/30/98
3.7.7-2	184/166	9/30/98
3.7.8-1	184/166	9/30/98
3.7.8-2	184/166	9/30/98
3.7.9-1	187/168	9/22/99
3.7.9-2	187/168	9/22/99
3.7.9-3	184/166	9/30/98
3.7.10-1	184/166	9/30/98
3.7.10-2	184/166	9/30/98
3.7.11-1	184/166	9/30/98
3.7.11-2	184/166	9/30/98
3.7.12-1	184/166	9/30/98
3.7.12-2	184/166	9/30/98
3.7.13-1	184/166	9/30/98
3.7.14-1	184/166	9/30/98
3.7.15-1	197/178	11/27/00
3.7.15-2	197/178	11/27/00
3.7.15-3	197/178	11/27/00
3.7.15-4	197/178	11/27/00
3.7.15-5	197/178	11/27/00
3.7.15-6	197/178	11/27/00
3.7.15-7	197/178	11/27/00
3.7.15-8	197/178	11/27/00
3.7.15-9	197/178	11/27/00
3.7.15-10	197/178	11/27/00
3.7.15-11	197/178	11/27/00
3.7.15-12	197/178	11/27/00

Page Number	Amendment	Revision Date
3.7.15-13	197/178	11/27/00
3.7.15-14	197/178	11/27/00
3.7.15-15	197/178	11/27/00
3.7.15-16	197/178	11/27/00
3.7.15-17	197/178	11/27/00
3.7.15-18	197/178	11/27/00
3.7.15-19	197/178	11/27/00
3.7.15-20	197/178	11/27/00
3.7.15-21	197/178	11/27/00
3.7.16-1	184/166	9/30/98
3.8.1-1	184/166	9/30/98
3.8.1-2	184/166	9/30/98
3.8.1-3	184/166	9/30/98
3.8.1-4	184/166	9/30/98
3.8.1-5	184/166	9/30/98
3.8.1-6	184/166	9/30/98
3.8.1-7	184/166	9/30/98
3.8.1-8	192/173	3/15/00
3.8.1-9	184/166	9/30/98
3.8.1-10	184/166	9/30/98
3.8.1-11	192/173	3/15/00
3.8.1-12	184/166	9/30/98
3.8.1-13	184/166	9/30/98
3.8.1-14	184/166	9/30/98
3.8.1-15	184/166	9/30/98
3.8.2-1	184/166	9/30/98
3.8.2-2	184/166	9/30/98
3.8.2-3	184/166	9/30/98
3.8.3-1	184/166	9/30/98
3.8.3-2	184/166	9/30/98
3.8.3-3	184/166	9/30/98
3.8.4-1	184/166	9/30/98
3.8.4-2	184/166	9/30/98

Page Number	Amendment	Revision Date
3.8.4-3	184/166	9/30/98
3.8.5-1	184/166	9/30/98
3.8.5-2	184/166	9/30/98
3.8.6-1	184/166	9/30/98
3.8.6-2	184/166	9/30/98
3.8.6-3	184/166	9/30/98
3.8.6-4	184/166	9/30/98
3.8.7-1	184/166	9/30/98
3.8.8-1	184/166	9/30/98
3.8.8-2	184/166	9/30/98
3.8.9-1	184/166	9/30/98
3.8.9-2	184/166	9/30/98
3.8.10-1	184/166	9/30/98
3.8.10-2	184/166	9/30/98
3.9.1-1	184/166	9/30/98
3.9.2-1	184/166	9/30/98
3.9.3-1	184/166	9/30/98
3.9.3-2	184/166	9/30/98
3.9.4-1	184/166	9/30/98
3.9.4-2	184/166	9/30/98
3.9.5-1	184/166	9/30/98
3.9.5-2	184/166	9/30/98
3.9.6-1	184/166	9/30/98
3.9.6-2	184/166	9/30/98
3.9.7-1	184/166	9/30/98
4.0.1	197/178	11/27/00
4.0.2	197/178	11/27/00
5.1-1	184/166	9/30/98
5.2-1	184/166	9/30/98
5.2-2	184/166	9/30/98
5.2-3	184/166	9/30/98
5.3-1	184/166	9/30/98
5.4-1	184/166	9/30/98

Page Number	Amendment	Revision Date
5.5-1	184/166	9/30/98
5.5-2	184/166	9/30/98
5.5-3	184/166	9/30/98
5.5-4	184/166	9/30/98
5.5-5	190/171	12/21/99
5.5-6	184/166	9/30/98
5.5-7	184/166	9/30/98
5.5-8	184/166	9/30/98
5.5-9	184/166	9/30/98
5.5-10	184/166	9/30/98
5.5-11	184/166	9/30/98
5.5-12	184/166	9/30/98
5.5-13	184/166	9/30/98
5.5-14	196/177	11/2/00
5.5-15	184/166	9/30/98
5.5-16	184/166	9/30/98
5.5-17	184/166	9/30/98
5.5-18	184/166	9/30/98
5.6-1	184/166	9/30/98
5.6-2	184/166	9/30/98
5.6-3	188/169	9/22/99
5.6-4	195/176	9/22/00
5.6-5	184/166	9/30/98
5.7-1	184/166	9/30/98
5.7-2	184/166	9/30/98

BASES

(Revised per section)

i	Revision 0	9/30/98
ii	Revision 0	9/30/98
iii	Revision 0	9/30/98
B 2.1.1	Revision 0	9/30/98
B 2.1.2	Revision 0	9/30/98

Page Number	Amendment	Revision Date
B 3.0	Revision 0	9/30/98
B 3.1.1	Revision 0	9/30/98
B 3.1.2	Revision 10	9/22/00
B 3.1.3	Revision 10	9/22/00
B 3.1.4	Revision 0	9/30/98
B 3.1.5	Revision 0	9/30/98
B 3.1.6	Revision 0	9/30/98
B 3.1.7	Revision 15	01/04/01
B 3.1.8	Revision 0	9/30/98
B 3.2.1	Revision 10	9/22/00
B 3.2.2	Revision 10	9/22/00
B 3.2.3	Revision 0	9/30/98
B 3.2.4	Revision 10	9/22/00
B 3.3.1	Revision 11	9/18/00
B 3.3.2	Revision 16	10/9/01
B 3.3.3	Revision 0	9/30/98
B 3.3.4	Revision 0	9/30/98
B 3.3.5	Revision 11	9/18/00
B 3.3.6	Revision 0	9/30/98
B 3.4.1	Revision 8	3/20/00
B 3.4.2	Revision 0	9/30/98
B 3.4.3	Revision 0	9/30/98
B 3.4.4	Revision 0	9/30/98
B 3.4.5	Revision 0	9/30/98
B 3.4.6	Revision 0	9/30/98
B 3.4.7	Revision 0	9/30/98
B 3.4.8	Revision 0	9/30/98
B 3.4.9	Revision 0	9/30/98
B 3.4.10	Revision 0	9/30/98
B 3.4.11	Revision 0	9/30/98
B 3.4.12	Revision 12	8/23/00
B 3.4.13	Revision 0	9/30/98
B 3.4.14	Revision 0	9/30/98

Page Number	Amendment	Revision Date
B 3.4.15	Revision 0	9/30/98
B 3.4.16	Revision 0	9/30/98
B 3.4.17	Revision 0	9/30/98
B 3.5.1	Revision 10	9/22/00
B 3.5.2	Revision 10	9/22/00
B 3.5.3	Revision 0	9/30/98
B 3.5.4	Revision 0	9/30/98
B 3.5.5	Revision 0	9/30/98
B 3.6.1	Revision 0	9/30/98
B 3.6.2	Revision 17	10/08/01
B 3.6.3	Revision 18	10/23/01
B 3.6.4	Revision 0	9/30/98
B 3.6.5	Revision 0	9/30/98
B 3.6.6	Revision 0	9/30/98
B 3.6.7	Revision 0	9/30/98
B 3.6.8	Revision 0	9/30/98
B 3.6.9	Revision 0	9/30/98
B 3.6.10	Revision 0	9/30/98
B 3.6.11	Revision 0	9/30/98
B 3.6.12	Revision 0	9/30/98
B 3.6.13	Revision 0	9/30/98
B 3.6.14	Revision 0	9/30/98
B 3.6.15	Revision 0	9/30/98
B 3.6.16	Revision 0	9/30/98
B 3.7.1	Revision 0	9/30/98
B 3.7.2	Revision 0	9/30/98
B 3.7.3	Revision 0	9/30/98
B 3.7.4	Revision 0	9/30/98
B 3.7.5	Revision 0	9/30/98
B 3.7.6	Revision 0	9/30/98
B 3.7.7	Revision 0	9/30/98
B 3.7.8	Revision 0	9/30/98
B 3.7.9	Revision 0	9/30/98

Page Number	Amendment	Revision Date
B 3.7.10	Revision 0	9/30/98
B 3.7.11	Revision 0	9/30/98
B 3.7.12	Revision 6	10/6/99
B 3.7.13	Revision 0	9/30/98
B 3.7.14	Revision 14	11/27/00
B 3.7.15	Revision 14	11/27/00
B 3.7.16	Revision 0	9/30/98
B 3.8.1	Revision 13	1/18/01
B 3.8.2	Revision 0	9/30/98
B 3.8.3	Revision 0	9/30/98
B 3.8.4	Revision 0	9/30/98
B 3.8.5	Revision 0	9/30/98
B 3.8.6	Revision 0	9/30/98
B 3.8.7	Revision 0	9/30/98
B 3.8.8	Revision 0	9/30/98
B 3.8.9	Revision 0	9/30/98
B 3.8.10	Revision 0	9/30/98
B 3.9.1	Revision 0	9/30/98
B 3.9.2	Revision 0	9/30/98
B 3.9.3	Revision 0	9/30/98
B 3.9.4	Revision 0	9/30/98
B 3.9.5	Revision 0	9/30/98
B 3.9.6	Revision 0	9/30/98
B 3.9.7	Revision 0	9/30/98

ATTACHMENT 2

REVISED TECHNICAL SPECIFICATION BASES 3.6.3

B 3.6 CONTAINMENT SYSTEMS

B 3.6.3 Containment Isolation Valves

BASES

BACKGROUND

The containment isolation valves form part of the containment pressure boundary and provide a means for fluid penetrations not serving accident consequence limiting systems to be provided with two isolation barriers that are closed on a containment isolation signal. These isolation devices are either passive or active (automatic). Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges, and closed systems are considered passive devices. Check valves, or other automatic valves designed to close without operator action following an accident, are considered active devices. Two barriers in series are provided for each penetration so that no single credible failure or malfunction of an active component can result in a loss of isolation or leakage that exceeds limits assumed in the safety analyses. One of these barriers may be a closed system. These barriers (typically containment isolation valves) make up the Containment Isolation System.

Automatic isolation signals are produced during accident conditions. Containment Phase "A" isolation occurs upon receipt of a safety injection signal. The Phase "A" isolation signal isolates nonessential process lines in order to minimize leakage of fission product radioactivity. Containment Phase "B" isolation occurs upon receipt of a containment pressure High-High signal and isolates the remaining process lines, except systems required for accident mitigation. In addition to the Phase "A" isolation signal, the purge and exhaust valves receive an isolation signal on a containment high radiation condition. As a result, the containment isolation valves (and blind flanges) help ensure that the containment atmosphere will be isolated from the environment in the event of a release of fission product radioactivity to the containment atmosphere as a result of a Design Basis Accident (DBA).

The OPERABILITY requirements for containment isolation valves help ensure that containment is isolated within the time limits assumed in the safety analyses. Therefore, the OPERABILITY requirements provide assurance that the containment function assumed in the safety analyses will be maintained.

BASES

BACKGROUND (continued)

Containment Purge System

The Containment Purge System operates to supply outside air into the containment for ventilation and cooling or heating and may also be used to reduce the concentration of noble gases within containment prior to and during personnel access.

There are five purge air supply line penetrations and four exhaust penetrations in the containment. The supply penetrations include one line through the reactor building wall, two through the containment vessel into upper containment, and two lines through the containment vessel into lower containment. The exhaust penetrations include two lines through the containment vessel out of upper containment, one line through the containment vessel out of lower containment, and one line through the reactor building wall. Two normally closed isolation valves at each containment vessel penetration provide containment isolation.

The upper containment purge portion of the system has the capability to operate when periods of sustained personnel access are required. This is allowed for normal operation (MODES 1-4), provided no more than one pair (one supply and one exhaust flow path) are open at one time. The upper containment supply and exhaust are also operated during refueling operation (MODES 5-6). The exhaust portion helps to reduce the consequences of a fuel handling accident in containment by removing and filtering any airborne radioactive effluents that may result from a fuel handling accident. The lower containment purge is only used during refueling operations because if these lines were used during normal operation, they may not close in the event of a LOCA.

APPLICABLE
SAFETY ANALYSES

The containment isolation valve LCO was derived from the assumptions related to minimizing the loss of reactor coolant inventory and establishing the containment boundary during major accidents. As part of the containment boundary, containment isolation valve OPERABILITY supports leak tightness of the containment. Therefore, the safety analyses of any event requiring isolation of containment is applicable to this LCO.

The DBAs that result in a release of radioactive material within containment are a loss of coolant accident (LOCA) and a rod ejection accident (Ref. 1). In the analyses for each of these accidents, it is assumed that containment isolation valves are either closed or function to close within the required isolation time following event initiation. This

BASES

APPLICABLE SAFETY ANALYSES (continued)

ensures that potential paths to the environment through containment isolation valves (including containment purge valves) are minimized. The safety analyses assume that the lower compartment and instrument room purge valves are closed at event initiation.

The DBA analysis assumes that, within 76 seconds after the accident, isolation of the containment is complete and leakage terminated except for the design leakage rate, L_a . The containment isolation total response time of 76 seconds includes signal delay, diesel generator startup (for loss of offsite power), and containment isolation valve stroke times.

The single failure criterion required to be imposed in the conduct of plant safety analyses was considered in the original design of the containment purge valves. Two valves in series on each purge line provide assurance that both the supply and exhaust lines could be isolated even if a single failure occurred.

The lower and instrument room purge valves may be unable to close in the environment following a LOCA. Therefore, each of the lower and instrument room purge valves is required to remain sealed closed during MODES 1, 2, 3, and 4. The upper purge valves may be opened for ALARA considerations. In this case, the single failure criterion remains applicable to the containment purge valves due to failure in the control circuit associated with each valve. Again, the purge system valve design precludes a single failure from compromising the containment boundary as long as the system is operated in accordance with the subject LCO.

The containment isolation valves satisfy Criterion 3 of 10 CFR 50.36 (Ref. 2).

LCO

Containment isolation valves form a part of the containment boundary. The containment isolation valves' safety function is related to minimizing the loss of reactor coolant inventory and establishing the containment boundary during a DBA.

The automatic power operated isolation valves are required to have isolation times within limits and to actuate on an automatic isolation signal. The lower compartment and instrument room purge valves must be maintained sealed closed. The valves covered by this LCO are listed along with their associated stroke times in the UFSAR (Ref. 3).

BASES

LCO (continued)

The normally closed isolation valves are considered OPERABLE when manual valves are closed, automatic valves are de-activated and secured in their closed position, blind flanges are in place, and closed systems are intact. These passive isolation valves/devices are those listed in Reference 3.

Purge valves with resilient seals and reactor building bypass valves must meet additional leakage rate requirements. The other containment isolation valve leakage rates are addressed by LCO 3.6.1, "Containment," as Type C testing.

This LCO provides assurance that the containment isolation valves and purge valves will perform their designed safety functions to minimize the loss of reactor coolant inventory and establish the containment boundary during accidents.

APPLICABILITY

In MODES 1, 2, 3, and 4, a DBA could cause a release of radioactive material to containment. In MODES 5 and 6, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, the containment isolation valves are not required to be OPERABLE in MODE 5. The requirements for containment isolation valves during MODE 6 are addressed in LCO 3.9.4, "Containment Penetrations."

ACTIONS

The ACTIONS are modified by a Note allowing penetration flow paths, except for lower containment purge supply and exhaust valves for the lower compartment and instrument room, to be unisolated intermittently under administrative controls. These administrative controls consist of stationing a dedicated operator at the valve controls, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for containment isolation is indicated. For valve controls located in the control room, an operator may monitor containment isolation signal status rather than be stationed at the valve controls. Due to the size of the containment purge line penetration and the fact that those penetrations exhaust directly from the containment atmosphere to the environment, the penetration flow path containing these valves may not be opened under administrative controls. A single purge valve in a penetration flow path may be opened to effect repairs to an inoperable valve, as allowed by SR 3.6.3.1.

BASES

ACTIONS (continued)

A second Note has been added to provide clarification that, for this LCO, separate Condition entry is allowed for each penetration flow path. This is acceptable, since the Required Actions for each Condition provide appropriate compensatory actions for each inoperable containment isolation valve. Complying with the Required Actions may allow for continued operation, and subsequent inoperable containment isolation valves are governed by subsequent Condition entry and application of associated Required Actions.

The ACTIONS are further modified by a third Note, which ensures appropriate remedial actions are taken, if necessary, if the affected systems are rendered inoperable by an inoperable containment isolation valve.

In the event the containment isolation valve leakage results in exceeding the overall containment leakage rate, Note 4 directs entry into the applicable Conditions and Required Actions of LCO 3.6.1.

A.1 and A.2

In the event one containment isolation valve in one or more penetration flow paths is inoperable except for purge valve or reactor building bypass leakage not within limit, the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic containment isolation valve, a closed manual valve, a blind flange, and a check valve inside containment with flow through the valve secured. For a penetration flow path isolated in accordance with Required Action A.1, the device used to isolate the penetration should be the closest available one to containment. Required Action A.1 must be completed within 4 hours. The 4 hour Completion Time is reasonable, considering the time required to isolate the penetration and the relative importance of supporting containment OPERABILITY during MODES 1, 2, 3, and 4.

For affected penetration flow paths that cannot be restored to OPERABLE status within the 4 hour Completion Time and that have been isolated in accordance with Required Action A.1, the affected penetration flow paths must be verified to be isolated on a periodic basis. This is necessary to ensure that containment penetrations required to be isolated following an accident and no longer capable of being automatically isolated will be in the isolation position should an event

BASES

ACTIONS (continued)

occur. This Required Action does not require any testing or device manipulation. Rather, it involves verification, through a system walkdown or computer status indication, that those isolation devices outside containment and capable of being mispositioned are in the correct position. The Completion Time of "once per 31 days for isolation devices outside containment" is appropriate considering the fact that the devices are operated under administrative controls and the probability of their misalignment is low. For the isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

Condition A has been modified by a Note indicating that this Condition is only applicable to those penetration flow paths with two containment isolation valves. For penetration flow paths with only one containment isolation valve and a closed system, Condition C provides the appropriate actions.

Required Action A.2 is modified by a Note that applies to isolation devices located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of these devices once they have been verified to be in the proper position, is small.

B.1

With two containment isolation valves in one or more penetration flow paths inoperable, except for the purge valve or reactor building bypass leakage not within limit, the affected penetration flow path must be isolated within 1 hour. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. The 1 hour Completion Time is consistent with the ACTIONS of LCO 3.6.1. In the event the affected penetration is isolated in accordance with Required Action B.1, the affected penetration must be verified to be isolated on a periodic basis per Required Action A.2, which remains in effect. This periodic verification is necessary to assure leak

BASES

ACTIONS (continued)

tightness of containment and that penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying each affected penetration flow path is isolated is appropriate considering the fact that the valves are operated under administrative control and the probability of their misalignment is low.

Condition B is modified by a Note indicating this Condition is only applicable to penetration flow paths with two containment isolation valves. Condition A of this LCO addresses the condition of one containment isolation valve inoperable in this type of penetration flow path.

C.1 and C.2

With one or more penetration flow paths with one containment isolation valve inoperable, the inoperable valve flow path must be restored to OPERABLE status or the affected penetration flow path must be isolated. The method of isolation must include the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, a closed manual valve, and a blind flange. A check valve may not be used to isolate the affected penetration flow path. Required Action C.1 must be completed within the 72 hour Completion Time. The specified time period is reasonable considering the relative stability of the closed system (hence, reliability) to act as a penetration isolation boundary and the relative importance of maintaining containment integrity during MODES 1, 2, 3, and 4. In the event the affected penetration flow path is isolated in accordance with Required Action C.1, the affected penetration flow path must be verified to be isolated on a periodic basis. This periodic verification is necessary to assure leak tightness of containment and that containment penetrations requiring isolation following an accident are isolated. The Completion Time of once per 31 days for verifying that each affected penetration flow path is isolated is appropriate because the valves are operated under administrative controls and the probability of their misalignment is low.

Condition C is modified by a Note indicating that this Condition is only applicable to those penetration flow paths with only one containment isolation valve and a closed system. The closed system must meet the requirements of Reference 5. This Note is necessary since this Condition is written to specifically address those penetration flow paths in a closed system.

BASES

ACTIONS (continued)

Required Action C.2 is modified by a Note that applies to valves and blind flanges located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted. Therefore, the probability of misalignment of these valves, once they have been verified to be in the proper position, is small. ■

D.1

With the reactor building bypass leakage rate not within limit, the assumptions of the safety analyses are not met. Therefore, the leakage must be restored to within limit within 4 hours. Restoration can be accomplished by isolating the penetration(s) that caused the limit to be exceeded by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. When a penetration is isolated the leakage rate for the isolated penetration is assumed to be the actual pathway leakage through the isolation device. If two isolation devices are used to isolate the penetration, the leakage rate is assumed to be the lesser actual pathway leakage of the two devices. The 4 hour Completion Time is reasonable considering the time required to restore the leakage by isolating the penetration(s) and the relative importance of secondary containment bypass leakage to the overall containment function.

E.1, E.2, and E.3

In the event one or more purge valves for upper and lower containment or instrument room in one or more penetration flow paths are not within the purge valve leakage limits, leakage must be restored to within limits, or the affected penetration flow path must be isolated. The method of isolation must be by the use of at least one isolation barrier that cannot be adversely affected by a single active failure. Isolation barriers that meet this criterion are a closed and de-activated automatic valve, closed manual valve, or blind flange. A valve with resilient seals utilized to satisfy Required Action E.1 must have been demonstrated to meet the leakage requirements of SR 3.6.3.6. The specified Completion Time is reasonable, considering that one containment purge valve remains closed so that a gross breach of containment does not exist.

In accordance with Required Action E.2, this penetration flow path must be verified to be isolated on a periodic basis. The periodic verification is

BASES

ACTIONS (continued)

necessary to ensure that containment penetrations required to be isolated following an accident, which are no longer capable of being automatically isolated, will be in the isolation position should an event occur. This Required Action does not require any testing or valve manipulation. Rather, it involves verification, through a system walkdown or computer status indication, that those isolation devices outside containment capable of being mispositioned are in the correct position. For the isolation devices inside containment, the time period specified as "prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of the inaccessibility of the isolation devices and other administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

For the containment purge valve with resilient seal that is isolated in accordance with Required Action E.1, SR 3.6.3.6 must be performed at least once every 92 days. This assures that degradation of the resilient seal is detected and confirms that the leakage rate of the containment purge valve does not increase during the time the penetration is isolated.

F.1 and F.2

If the Required Actions and associated Completion Times are not met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE
REQUIREMENTS

SR 3.6.3.1

Each containment purge valve for the lower compartment and instrument room is required to be verified sealed closed at 31 day intervals. This Surveillance is designed to ensure that a gross breach of containment is not caused by an inadvertent or spurious opening of a containment purge valve. Detailed analysis of these valves to conclusively demonstrate their ability to close during a LOCA in time to limit offsite doses has not been performed. Therefore, these valves are required to be in the sealed closed position during MODES 1, 2, 3, and 4. A valve that is sealed closed must have motive power to the valve operator removed. This can

BASES

SURVEILLANCE REQUIREMENTS (continued)

be accomplished by de-energizing the source of electric power or by removing the air supply to the valve operator. In this application, the term "sealed" has no connotation of leak tightness. The Frequency is a result of an NRC initiative, Generic Issue B-24 (Ref. 4), related to containment purge valve use during plant operations. In the event purge valve leakage requires entry into Condition E, the Surveillance permits opening one purge valve in a penetration flow path to perform repairs.

SR 3.6.3.2

This SR ensures that the containment purge supply and exhaust isolation valves for the upper compartment are closed as required or, if open, open for an allowable reason. If a valve is open in violation of this SR, the valve is considered inoperable. If the inoperable valve is not otherwise known to have excessive leakage when closed, it is not considered to have leakage outside of limits. The SR is not required to be met when the valves are open for the reasons stated. The valves may be opened for pressure control, ALARA or air quality considerations for personnel entry, or for Surveillances that require the valves to be open. The valves are capable of closing in the environment following a LOCA. Therefore, these valves are allowed to be open for limited periods of time. The 31 day Frequency is consistent with other containment isolation valve requirements discussed in SR 3.6.3.3.

SR 3.6.3.3

This SR requires verification that each containment isolation manual valve and blind flange located outside containment or annulus and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside of the containment boundary is within design limits. This SR does not require any testing or valve manipulation. Rather, it involves verification, through a system walkdown or computer status indication, that those containment isolation valves outside containment and capable of being mispositioned are in the correct position. Since verification of valve position for containment isolation valves outside containment is relatively easy, the 31 day Frequency is based on engineering judgment and was chosen to provide added assurance of the correct positions. The SR specifies that containment isolation valves that are open under administrative controls

BASES

SURVEILLANCE REQUIREMENTS (continued)

are not required to meet the SR during the time the valves are open. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be the correct position upon locking, sealing, or securing.

The Note applies to valves and blind flanges located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted during MODES 1, 2, 3 and 4 for ALARA reasons. Therefore, the probability of misalignment of these containment isolation valves, once they have been verified to be in the proper position, is small.

SR 3.6.3.4

This SR requires verification that each containment isolation manual valve and blind flange located inside containment or annulus and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside of the containment boundary is within design limits. For containment isolation valves inside containment, the Frequency of "prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days" is appropriate since these containment isolation valves are operated under administrative controls and the probability of their misalignment is low. The SR specifies that containment isolation valves that are open under administrative controls are not required to meet the SR during the time they are open. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be the correct position upon locking, sealing, or securing.

This Note allows valves and blind flanges located in high radiation areas to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted during MODES 1, 2, 3, and 4, for ALARA reasons. Therefore, the probability of misalignment of these containment isolation valves, once they have been verified to be in their proper position, is small.

SR 3.6.3.5

Verifying that the isolation time of each automatic power operated containment isolation valve is within limits is required to demonstrate

BASES

SURVEILLANCE REQUIREMENTS (continued)

OPERABILITY. The isolation time test ensures the valve will isolate in a time period less than or equal to that assumed in the safety analyses. The isolation time is specified in the UFSAR and Frequency of this SR are in accordance with the Inservice Testing Program.

SR 3.6.3.6

For containment purge valves with resilient seals, additional leakage rate testing beyond the test requirements of 10 CFR 50, Appendix J, Option A, is required to ensure OPERABILITY. The measured leakage rate for containment purge lower compartment and instrument room valves must be $\leq 0.05 L_a$ when pressurized to P_a . The measured leakage rate for containment purge upper compartment valves must be $\leq 0.01 L_a$ when pressurized to P_a . Operating experience has demonstrated that this type of seal has the potential to degrade in a shorter time period than do other seal types. Based on this observation and the importance of maintaining this penetration leak tight (due to the direct path between containment and the environment) a Frequency of 184 days was established.

The containment purge upper compartment valves may be used during normal operation, therefore, in addition to the 184 day Frequency, this SR must be performed every 92 days after opening the valves. The 92 day Frequency was chosen recognizing that cycling the valve could introduce additional seal degradation (beyond that occurring to a valve that has not been opened). Thus, decreasing the interval (from 184 days) is a prudent measure after a valve has been opened. The containment purge lower compartment valves and instrument room valves remain closed during normal operation and this SR is only performed every 184 days for these valves.

SR 3.6.3.7

Automatic containment isolation valves close on a containment isolation signal to prevent leakage of radioactive material from containment following a DBA. This SR ensures that each automatic containment isolation valve will actuate to its isolation position on a containment isolation signal. The isolation signals involved are Phase A, Phase B, and Safety Injection. This surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant

BASES

SURVEILLANCE REQUIREMENTS (continued)

outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass this Surveillance when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

SR 3.6.3.8

This SR ensures that the combined leakage rate of all reactor building bypass leakage paths is less than or equal to the specified leakage rate. This provides assurance that the assumptions in the safety analysis are met. The leakage rate of each bypass leakage path is assumed to be the maximum pathway leakage (leakage through the worse of the two isolation valves) unless the penetration is isolated by use of one closed and de-activated automatic valve, closed manual valve, or blind flange. In this case, the leakage rate of the isolated bypass leakage path is assumed to be the actual pathway leakage through the isolation device. If both isolation valves in the penetration are closed, the actual leakage rate is the lesser leakage rate of the two valves. This method of quantifying maximum pathway leakage is only to be used for this SR (i.e., Appendix J maximum pathway leakage limits are to be quantified in accordance with Appendix J). Penetrations which are not individually testable shall be determined to have no detectable leakage when tested with soap bubbles while the containment is pressurized during SR 3.6.1.1 Type A testing. The Frequency is required by 10 CFR 50, Appendix J, Option A, as modified by approved exemptions (and therefore, the Frequency extensions of SR 3.0.2 may not be applied), since the testing is an Appendix J, Type B or C test. This SR simply imposes additional acceptance criteria.

Bypass leakage is considered part of L_a .

REFERENCES

1. UFSAR, Section 15.
 2. 10 CFR 50.36, Technical Specifications, (c)(2)(ii).
 3. UFSAR, Section 6.2.
 4. Generic Issue B-24.
 5. UFSAR, Section 6.2.4.2
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