

Attachment 3

PROPOSED CURRENT TECHNICAL SPECIFICATION CHANGES
(MARK-UPS & REVISIONS)

9506070228 950530
PDR ADOCK 0500045B
P PDR

CONTAINMENT SYSTEMS

RECEIVED

DRYWELL BYPASS LEAKAGE

JUN 14 1991

LIMITING CONDITION FOR OPERATION

SDC

3.6.2.2 Drywell bypass leakage shall be less than or equal to 10% of the acceptable A/\sqrt{k} design value of 1.0 ft².

APPLICABILITY: When DRYWELL INTEGRITY is required per Specification 3.6.2.1.

ACTION:

With the drywell bypass leakage greater than 10% of the acceptable A/\sqrt{k} design value of 1.0 ft², restore the drywell bypass leakage to within the limit prior to increasing reactor coolant system temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.2.2 At least once per ^{5 years} ~~18 months~~, the drywell bypass leakage rate test shall be conducted at an initial differential pressure of 3.0 psid and the A/\sqrt{k} shall be calculated from the measured leakage. One drywell air lock door shall remain open during the drywell leakage test such that each drywell door is leak tested during at least every other leakage rate test.

- a. If any drywell bypass leakage test fails to meet the specified limit, ~~the schedule for subsequent tests shall be reviewed and approved by the Commission.~~ If two consecutive tests fail to meet the limit, a test shall be performed at least every ^{5 year} ~~9 months~~ until two consecutive tests meet the limit, at which time the ¹⁸ ~~18-month~~ test schedule may be resumed.

frequency shall be increased to at least once per 36 months; if the subsequent test meets the limit, the 5 year test schedule may be resumed.

*For the first cycle only, this may be extended to coincide with the refueling outage, scheduled to begin September 15, 1987.

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3.6.2.2 Drywell bypass leakage shall be less than or equal to 10% of the acceptable A/\sqrt{k} design value of 1.0 ft².

APPLICABILITY: When DRYWELL INTEGRITY is required per Specification 3.6.2.1.

ACTION:

With the drywell bypass leakage greater than 10% of the acceptable A/\sqrt{k} design value of 1.0 ft², restore the drywell bypass leakage to within the limit prior to increasing reactor coolant system temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.2.2 At least once per 5 years the drywell bypass leakage rate test shall be conducted at an initial differential pressure of 3.0 psid and the A/\sqrt{k} shall be calculated from the measured leakage. One drywell air lock door shall remain open during the drywell leakage test such that each drywell door is leak tested during at least every other leakage rate test.

- a. If any drywell bypass leakage test fails to meet the specified limit, the frequency shall be increased to at least once per 36 months, if the subsequent test meets the limit, the 5 year test schedule may be resumed. If two consecutive tests fail to meet the limit, a test shall be performed at least every 18 months until two consecutive test meet the limit, at which time the 5 year test schedule may be resumed.

Attachment 4

PROPOSED IMPROVED STANDARD TECHNICAL SPECIFICATION CHANGES

(MARK-UPS & REVISIONS)

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.6.5.1.3

The analyses in Reference 1 are based on a maximum drywell bypass leakage. This Surveillance ensures that the actual drywell bypass leakage is less than or equal to the acceptable $A\sqrt{k}$ design value of 1.0 ft^2 assumed in the safety analysis. As left drywell bypass leakage, prior to the first startup after performing a required drywell bypass leakage test, is required to be $\leq 10\%$ of the drywell bypass leakage limit. At all other times between required drywell leakage rate tests, the acceptance criteria is based on design $A\sqrt{k}$. At the design $A\sqrt{k}$ the containment temperature and pressurization response are bounded by the assumptions of the safety analysis. The leakage test is performed every 18 months, consistent with the difficulty of performing the test, risk of high radiation exposure, and the remote possibility that a component failure that is not identified by some other drywell or primary containment SR might occur. Operating experience has shown that these components usually pass the Surveillance when performed at the 18 month frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

on a performance
based frequency

Delete

INSERT B1

SR 3.6.5.1.4

The exposed accessible drywell interior and exterior surfaces are inspected to ensure there are no apparent physical defects that would prevent the drywell from performing its intended function. This SR ensures that drywell structural integrity is maintained. The Frequency was chosen so that the interior and exterior surfaces of the drywell can be inspected in conjunction with the inspections of the primary containment required by 10 CFR 50, Appendix J (Ref. 2). Due to the passive nature of the drywell structure, the specified Frequency is sufficient to identify component degradation that may affect drywell structural integrity.

REFERENCES

1. USAR, Chapter 6 and Chapter 15.

INSERT B1

This Surveillance is performed at least once every 5 years. If during the performance of this required Surveillance the drywell bypass leakage rate is $> 10\%$ of the drywell bypass leakage limit the Surveillance Frequency is increased to every 36 months. If during the performance of the subsequent consecutive Surveillance the drywell bypass leakage rate is $\leq 10\%$ of the drywell bypass leakage limit the 5 year Frequency may be resumed. If during the performance of two consecutive Surveillances the drywell bypass leakage is $> 10\%$ of the drywell bypass leakage limit the Surveillance Frequency is increased to at least once every 18 months. The 18 month Frequency is maintained until during the performance of two consecutive Surveillances the drywell bypass leakage rate is $\leq 10\%$ of the drywell bypass leakage limit, at which time the 5 year Frequency may be resumed. For two Surveillances to be considered consecutive the Surveillances must be performed at least 12 months apart.

Since the Frequency is performance based,

SURVEILLANCE
REQUIREMENTS
(continued)SR 3.6.5.1.3

The analyses in Reference 1 are based on a maximum drywell bypass leakage. This Surveillance ensures that the actual drywell bypass leakage is less than or equal to the acceptable $A\sqrt{k}$ design value of 1.0 ft³ assumed in the safety analysis. As left drywell bypass leakage, prior to the first startup after performing a required drywell bypass leakage test, is required to be $\leq 10\%$ of the drywell bypass leakage limit. At all other times between required drywell leakage rate tests, the acceptance criteria is based on design $A\sqrt{k}$. At the design $A\sqrt{k}$ the containment temperature and pressurization response are bounded by the assumptions of the safety analysis. The leakage test is performed on a performance based frequency, consistent with the difficulty of performing the test, risk of high radiation exposure, and the remote possibility that a component failure that is not identified by some other drywell or primary containment SR might occur. This Surveillance is performed at least once every 5 years. If during the performance of this required Surveillance the drywell bypass leakage rate is $> 10\%$ of the drywell bypass leakage limit the Surveillance Frequency is increased to every 36 months. If during the performance of the subsequent consecutive Surveillance the drywell bypass leakage rate is $\leq 10\%$ of the drywell bypass leakage limit the 5 year Frequency may be resumed. If during the performance of two consecutive Surveillances the drywell bypass leakage is $> 10\%$ of the drywell bypass leakage limit the Surveillance Frequency is increased to at least once every 18 months. The 18 month Frequency is maintained until during the performance of two consecutive Surveillances the drywell bypass leakage rate is $\leq 10\%$ of the drywell bypass leakage limit, at which time the 5 year Frequency may be resumed. For two Surveillances to be considered consecutive the Surveillances must be performed at least 12 months apart. The Frequency was concluded to be acceptable from a reliability standpoint since the frequency is performance based.

SR 3.6.5.1.4

The exposed accessible drywell interior and exterior surfaces are inspected to ensure there are no apparent physical defects that would prevent the drywell from performing its intended function. This SR ensures that drywell structural integrity is maintained. The Frequency was chosen so that the interior and exterior surfaces of the drywell can be inspected in conjunction with the inspections of the primary containment required by 10 CFR 50, Appendix J (Ref. 2). Due to the passive nature of the drywell structure, the specified Frequency is sufficient to identify component degradation that may affect drywell structural integrity.

REFERENCES

1. USAR, Chapter 6 and Chapter 15.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.6.5.1.3 Verify bypass leakage is less than or equal to the bypass leakage limit. However, during the first unit startup following bypass leakage testing performed in accordance with this SR, the acceptance criterion is $\leq 10\%$ of the drywell bypass leakage limit.</p>	<p>18 months INSERT 1</p>
<p>SR 3.6.5.1.4 Visually inspect the exposed accessible interior and exterior surfaces of the drywell.</p>	<p>Once prior to performance of each Type A test required by SR 3.6.1.1.1</p>

INSERT 1

18 months
following 2
consecutive
tests with
bypass leakage
> 10% of the
bypass leakage
limit until 2
consecutive
tests are \leq 10%
of the bypass
leakage limit

AND

36 months
following a
test with
bypass leakage
> 10% of the
bypass leakage
limit

AND

5 years

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.6.5.1.3 Verify bypass leakage is less than or equal to the bypass leakage limit. However, during the first unit startup following bypass leakage testing performed in accordance with this SR, the acceptance criterion is $\leq 10\%$ of the drywell bypass leakage limit.</p>	<p>18 months following 2 consecutive tests with bypass leakage $> 10\%$ of the bypass leakage limit until 2 consecutive tests are $\leq 10\%$ of the bypass leakage limit</p> <p>AND</p> <p>36 months following a test with bypass leakage $> 10\%$ of the bypass leakage limit</p> <p>AND</p> <p>5 years</p>
<p>SR 3.6.5.1.4 Visually inspect the exposed accessible interior and exterior surfaces of the drywell.</p>	<p>Once prior to performance of each Type A test required by SR 3.6.1.1.1</p>

Attachment 5

**DRYWELL BYPASS LEAK RATE TEST COSTS
(TYPICAL)**

	Amount	Sub-Total Amount		
Equipment	\$25,000	\$25,000		
Compressors (2)				
Air Dryer (2)				
After Coolers (2)				
Manifold (1)				
Hoses (vary)				
Mechanic				
Estimated Man-Hrs (\$50/hr)	1/ 275	\$13,750		
Test Director/Test Eng/Tech		(Man/Hr x Rate =)		
Procedure Review				
Tagging				
Hook-ups				
Actual Test Walk-Downs				
Test Review/Approval				
Critical Path Time	2/ 24	\$432,000		
(\$18,000/HR)				
Person Rem	3/ Not Included			
1 person rem x \$15,000				
TOTAL -1 DBLRT		\$470,750		
			TOTAL *	\$6,590,500
			(14 DBLRTs)	
NOTES: 1/ including Contract labor 2/ not available at this time 3/ replacement power costs				*Total of 14 DBLRTs eliminated over remaining licensed life of the plant (30 years)

Attachment 6

PREVIOUS RESULTS OF RBS DRYWELL BYPASS LEAKAGE RATE TESTS		
TEST DATE	RATIO TO DESIGN LIMIT	CALCULATED A/\sqrt{k}
04/85 (PREOP)	1.4%	0.01400 ft ²
12/87 (RF-01)	1.5%	0.01500 ft ²
5/89 (RF02)	0.025%	0.00025 ft ²
11/90 (RF03)	0.861%	.00861 ft ²
08/92 (RF04)	1.88%	0.01880 ft ²
06/94 (RF05)	1.05%	0.01050 ft ²