CONDITION REPORT
ED 83421

NO 2000 0995

INITIATOR

EVENT DATE	EVENT TIME	DISCOVERY DATE	DISCOVERY TIME	REFERENCE DOCUMENTS/ASSET NUMBER
4-15-00	23:30	4-15-00	23:30	

CONDITION DESCRIPTION

The RV head CRDM nozzle flange at location D-10 has extensive pitting across the outer gasket groove. The inner gasket groove also has pitting.

☐ CONTINUED

NAME (Print)	SIGNATURE	DATE	ORGANIZATION	TELEPHONE NO.	MAIL LOCATION
Shannon Lovelace	Shannon R Lovelace	4-16-00	FTI	8260	7010

SUPERVISOR

PLANT OPERATIONS REVIEW ☒ YES ☐ NO

COMMENTS

FTI NCR initiated. This nozzle flange may have had an FTI NCR initiated in RF0 10 and a PCAQR.

RECOMMENDED CATEGORY Routine

☐ CONTINUED

NAME (Print)	SIGNATURE	DATE	ORGANIZATION	TELEPHONE NO.	MAIL LOCATION
Thomas R. LeMay	[signature]	4/16/00	IMC	7176	7010

PLANT OPERATIONS

REPORTABILITY ☐ 1 HR ☐ 4 HR ☐ 24 HR ☑ N/A

OPERABILITY ☐ YES ☐ NO ☐ N/A

IMMEDIATE ACTIONS TAKEN OR NEEDED / COMMENTS

FURTHER EVALUATION REQUIRED

MODE 4 RESTRAINT

cc: Initiator
CR Files
Nuclear Records Management

☐ CONTINUED

NAME (Print)	SIGNATURE	DATE	TIME
PLOEGER	T. Ploeger	4/16/00	0507

CONDITION REPORT
ED 8342A-1

NO 2000-0995

Page ~~1 of 1~~ 2 of 3

MANAGEMENT REVIEW COMMITTEE

OWNER	CATEGORY	DUE DATE	OPERATING EXPERIENCE REPORT
SYME	Routine		☒ EVALUATE ☐ INITIATE

☐ CATPR	CAUSE DETERMINATION ☒ APPARENT ☐ ROOT CAUSE ☐ MULTI DISC ROOT CAUSE	☐ ERB

☐ EXPERIENCE REVIEW	☐ EXTENT OF CONDITION	☐ POTENTIAL MRFF	☐ OTHER REVIEW REQUIRED

MRC COMMENTS

On 4/6/2000 Framatome Technologies completed the Control Rod Drive (CRD) video inspection. Five leaking Control Rod Drives were identified at locations; F8, G9, F10, D10, C11 The main source of leakage was believed to be associated with D10 and F10 drives. Positive evidence existed that drives F8, D10 and C11 have limited gasket leakage. Based on the available information, System Engineering recommend replacement of gaskets and repairs of the flanges for Control Rod Drives located at F8, G9, F10, D10 and C11. In the event that the examination of flanges (for the above listed drives) indicated presence of steam cuts machining of the flange faces was recommend as necessary.

During the subsequent gasket replacement and examination of flanges it was noted that the F10 and D10 flanges have imperfect surface condition. This CR was initiated to evaluate the D10 flange condition. The F10 flange condition is discussed in CR 2000-0994.

Video inspection of the D10 flange indicated presence of large pitting on the inner and outer gasket areas. The pitting was located mainly on the outer race of the inner gasket. The outer gasket area indicated leakage path and flange material loss. There was evidence of erosion noted. Ron Pillow recommended that the condition of the flange is unacceptable for gasket replacement and recommended the D10 flange machining. This Framatome Technologies evaluation was supported by the Davis Besse System Engineering recommendation to machine the D10 flange surface.

The apparent cause of the pitting is associated with the random loss of the CRD flange bolt(s) tension. This resulted with a small steam leak that propagated with time. This type of leak is well recognized and common in the nuclear industry. It is also difficult to predict. Since the cost of preventative actions to verify the elongation of the CRD flange studs are extremely high these actions are typically not recommended.

Conclusions.

System Engineering and Framatome Technologies recommend that the D10 flange be machined and new gasket installed.

The D10 flange has been machined and new gasket installed. W.O. 98-000336-000

NO OE is REQUIRED. This does not meet the criteria for an OE.

SUPERVISOR ASSIGNED DUE DATE:			☐ CONTINUED
10 CFR PART 21? ☒ NO ☐ YES	IF YES, DATE	SYSTEM CAPABLE OF PERFORMING SPECIFIED FUNCTION? ☐ YES ☐ NO ☒ N/A	
ANI REVIEW REQUIRED? ☐ NO ☒ YES IF YES, ANI SIGNATURE REQUIRED		SIGNATURE Thomas H Lopez ANII	DATE 4/26/00
PREPARER (Print) **Andrew Siemaszko** Andrew Siemaszko		SIGNATURE Andrew Siemaszko	DATE 4/26/00
SUPERVISOR APPROVAL (Print) **Glenn Mcintyre**		SIGNATURE	DATE 4-26-00
MANAGER APPROVAL (Print) ☒ N/A		SIGNATURE	DATE
DIRECTOR APPROVAL (Print) ☒ N/A		SIGNATURE	DATE
VICE PRESIDENT APPROVAL (Print) ☒ N/A		SIGNATURE	DATE
SRB APPROVAL (Print) ☐ OE REQUIRED ☒ N/A		SIGNATURE	DATE
ERB APPROVAL (Print) ☒ N/A		SIGNATURE	DATE

FRAMATOME TECHNOLOGIES

CR 2000 0995
3 of 3

Attachment 10.0
CRDM NF RESURFACING
- 177FA -
SIGN OFFS AND DATA ENTRY

CRDM NF Location
D-10

Step	Description	Initials	Date
8.12.4 IV		DEM	4/26/00
		DEM IV	4-26-00

Inspection Data FULL						MAX	MIN	MAX Minus MIN
Channel Number Tool Position →	0	90	180	270	0			
Actual Indicator position (AIP) →	0	90	180	270	0			
1. (Reference Groove Depth)	.2368	.2457	.2362	.2360	.2367	.2457	.2362	.0095
2. (Inner Groove Depth)	.0902	.0889	.0861	.0869	.0902	.0902	.0861	.0041
3. (Inner Groove Width)	.3152	.3157	.3159	.3154	.3152	.3159	.3152	.0007
4. (Inner Groove ID Runout)	.1251	.1267	.1261	.1248	.1249	.1267	.1248	.0019
Actual Indicator Position (AIP) →	180	270	0	90	180			
5. (Outer Groove Depth)	.0550	.0601	.0635	.0636	.0550	.0636	.0550	.0046
6. (Outer Groove Width)	.2004	.1997	.2001	.2003	.2004	.2004	.1997	.0007
7. (Outer Groove ID Runout)	.3211	.3194	.3203	.3219	.3212	.3219	.3194	.0025
Actual Indicator Position (AIP) →	90	180	270	0	90			
8. (Flush Indicator)	.2045	.2045	.2015	.2053	.2045	.2053	.2045	.0008

.2045 DEM

Calculations: All dimensions in inches

1. Reference Groove Depth

Actual Indicator Position (AIP) →	0	90	180	270	0	Parallelism
0.1865 + Channel 1 Zero – Channel 1 Reading	.1341	.1352	.1347	.1340	.1342	.0095

2. Inner Groove Depth

Actual Indicator Position (AIP) →	0	90	180	270	0	Parallelism
0.0998 + Channel 2 Zero – Channel 2 Reading	.0971	.0985	.1012	.1004	.0971	.0041

3. Outer Groove Depth

Actual Indicator Position (AIP) →	0	90	180	180	270	Parallelism
0.0999 + Channel 5 Zero – Channel 5 Reading	.0974	.0973	.1019	.1019	.1008	.0046

4. Inner Groove

Actual Indicator Position (AIP) →	0	90	180	270	0	
0.3112 + Channel 3 Zero – Channel 3 Reading	.3182	.3177	.3175	.3180	.3182	Width
3.0003 – Channel 4 Zero + Channel 4 Reading	2.9923	2.9935	2.9933	2.9920	2.9920	Inner Radius
Width + Inner Radius	3.3105	3.3116	3.3108	3.3100	3.3107	Outer Radius
Diameter Calculations	Inner Diameter		Outer Diameter		Dia	
Radius 0 + Radius 180	5.9856		6.6213		0-180	
Radius 90 + Radius 270	5.9859		6.6216		90-270	

5. Outer Groove

Actual Indicator Position (AIP) →	0	90	180	180	270	
0.3110 + Channel 6 Zero – Channel 6 Reading	.3184	.3182	.3181	.3181	.3188	Width
3.4374 – Channel 7 Zero + Channel 7 Reading	3.4298	3.4314	3.4306	3.4307	3.4289	Inner Radius
Width + Inner Radius	3.7482	3.7496	3.7487	3.7488	3.7477	Outer Radius
Diameter Calculations	Inner Diameter		Outer Diameter		Dia.	
Radius 0 + Radius 180	6.8604		7.4969		0-180	
Radius 90 + Radius 270	6.8621		7.4984		90-270	

Note: See NCR # 6002582-00 for disposition of inner + outer groove depth. DEM

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