Sargent, & Lundy

Don K. Schopfer Senior Vice President 312-269-6078

> May 28, 1998 Project No. 9583-100

> > 11 ADD1

Docket No. 50-423

Northeast Nuclear Energy Company Millstone Nuclear Power Station, Unit No. 3 Independent Corrective Action Verification Program

United States Nuclear Regulatory Commission Attention: Document Control Desk Washington, D.C. 20555

I have enclosed the following discrepancy reports (DRs) identified during our review activities for the ICAVP. These DRs are being distributed in accordance with the Communications Protocol, PI-MP3-01.

I have enclosed the following sixteen (16) DRs for which the NU resolutions have been reviewed and accepted by S&L.

DR No. DR-MP3-0029 DR No. DR-MP3-0035 DR No. DR-MP3-0081 DR No. DR-MP3-0161 DR No. DR-MP3-0376 DR No. DR-MP3-0667 DR No. DR-MP3-0676 DR No. DR-MP3-0854 DR No. DR-MP3-0944 DR No. DR-MP3-0984 DR No. DR-MP3-1009 DR No. DR-MP3-1011 DR No. DR-MP3-1068 DR No. DR-MP3-1072 DR No. DR-MP3-1074 DR No. DR-MP3-1079

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May 28, 1998 Project No. 9583-100 Page 2

Please direct any questions to me at (312) 269-6078.

Yours very truly,

D. K. S. longer/m

D. K. Schopfer SeniorVice President and **ICAVP** Manager

DKS:spr Enclosures Copies: E. Imbro (1/1) Deputy Director, ICAVP Oversight T. Concannon (1/1) Nuclear Energy Advisory Council J. Fougere (1/1) NU m:\icavp\corr\98\ur0528-a.doc

lortheast Utilities Aillstone Unit 3	ICAVP Discrepancy Repo	DR No. DR-MP3-0029
Beview Group	System	DR RESOLUTION ACCEPTED
Review Element: Discipline: Discrepancy Type: System/Process:	System Design Mechanical Design Calculation SWP	Potential Operability Issue Yes No
NRC Significance level:	3	Date FAXed to NU:
		Date Published: 9/11/97
Discrepancy:	Service Water Pumphouse Ve	ntilation Calculation Discrepancy
Description:	The following calculation every correct heat load from the serv in determining the service wate requirements:	e reviewed to verify that the lice water pump motors were used er pump room ventilation
	Calculation P-198 Rev. 0, date Circulating & Service Water Pro	d July 10, 1973, Ventilation - ump House ated 12/14/83_3HVY*EN2A/2B
	Cycling Frequency Calculation P(B)-920 Rev. 0, d Period of Operation of the Sen Recirculation Mode	ated 12/14/83, Recommended vice Water Pumphouse Ventilatio
	Calculation P(B)-925 Rev. 0, d Pumphouse Ventilation Requir	ements
	The review identified the follow	ving descrepancies:
	1) Calculation P-198 used 800 from one service water pump r (PDDS) data for service water 3SWP*P1B states that the mo HP requirement of 555 hp.Two FSAR section 9.2.1.2 while the operating. This would result in the pump room from the service	hp for calculating the heat loss motor. Plant Design Data System pump 3SWP*P1A and tor rating is 600 hp with a brake pumps operate post-LOCA per e calculation only considered one higher than calculated heat loss to be water pump motors.
	Calculation P(B)-901 indicates calculation P-198. However, c an active calculation in the cal has been superseded by P(B)-	that P(B)-906 supersedes alculation P-198 is still shown as culation database and P(B)-906 925.
	2) Calculation P(B)-901 consid with a bhp of 561. Two pumps section 9.2.1.2 which would re loss to the pump room from th	lered only one pump operating operate post-LOCA per FSAR sult in higher than calculated hear e service water pump maters.
	3) Calculation P(B)-920 consid while two pumps operate post-	dered only one pump operating LOCA per FSAR section 9.2.1.2
	4) Calculation P(B)-925 used in P(B)-901 which only considered Section 9.2.1.2, two pumps on operate post-LOCA.	motor load values from calculation ad one pump operating. Per FSAR the same division are required to
	The discrepancy is assigned a discrepancy may result in a hi (SWP) room temperature than	significance level 3 because the gher Servive Water Pumphouse the design basis temperature

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Northeast Utilities Millstone Unit 3	IC/ Discrepa	AVP ncy Repo	ort	DR No. DR-	MP3-0021
NEW YORK, YORK, AND "RECEIVED & REPORT OF SHARE DE LA ARTICU DE LA ARTICU DE LA ARTICU DE LA ARTICU DE LA ARTIC	required to support the SWP equipment operation.				
Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	Stout, M. D. Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid X X X X	Invalid	Review Needed	Date 9/4/97 9/4/97 9/8/97 9/8/97
INVALID:			navana oryon university tang		COMPANY CASE CASE OF CASE
Date:	5/27/98				
RESOLUTION:	First Response: NU has conclude identified a condi requires correction The calculations Condition Report necessary correct	d that Discretion not prev on. will be revise (CR) M3-97 tive actions	epancy Repo riously disco ed to correct -3283 was w to resolve th	this condition ritten to provisi issue. Base	029 has which n. ide the ed upon a

have been finalized a supplemented response will be provided confirming the results. NU concurs that until further analysis is completed and evaluated, this is a Significance Level 3 discrepancy. Second Response:

additional heat load from a second pump in conjunction with the lower BHP requirement, there exists a sufficient margin in the ventilation system to support the preliminary conclusion that the system will meet its design requirements. Once the calculation

NU has concluded that Discrepancy Report, DR-MP3-029, has identified a condition not previously discovered by NU which required correction.

NU reponse to DR-MP3-029 (M3-IRF-00418) that was previously submitted was based upon a preliminary Engineering Evaluation. This DR was returned from S&L as "Pending" until " completion and submittal of calculation and supplement" is presented. The corrective action specified in CR M3-97-3283 requires calculations P(B)-1118 and P(B)-901 to be completed by Sched. Ref. 06U02.

In order to enter Mode 4, Calculation # SWP-01516M3, "Calculation for Service Water Pump Cubicle Temperatures for Operability Determination", was done to support Technical Evaluation # M3-EV-98-0038, Rev. 9; "Service Water Pump Cubicle Temperature with Two Pump Operation".

Technical Evaluation # M3-EV-98-0038 was done to support Operability Determination # MP3-028-98.

Results presented in Calculation # SWP-01516M3 verify that the

ICAVP Discrepancy Report

ventilation system has sufficient margin to account for two service water pump operation in the post LOCA configuration.

Since this discrepancy does not change the conclusion of the original ventilation calculation and the service water pumps are still capable of performing their intended safety function, NU considers this to be a Sign Sicance Level 4 issue.

Attachments: Calculation # SWP-01516M3, Tech. Eval. M3-EV-98-0038, OD # MP3-028-98, CR M3-97-3283

Third Response (M3-IRF-2150)

NU has concluded that items # 4 & 5 in "Comments on Second Response" to Discrepancy Report, DR-MP3-029, IRF-01965, have identified conditions not previously discovered by NU which required correction.

Item #4. FSAR Section 9.4.8.1.1 will be revised to reflect the service water pump cubicle temperature at outdoor design temperature coincident with two pump operation in a post LOCA mode.

Item # 5. FSAR Appendix 3B will be revised to reflect the service water pump cubicle temperature excursion with the ventilation system in the winter alignment coincident with two pump operation in a post LOCA mode.

The corrective action plan for CR M3-98-1900 has been approved to ensure that the FSAR will be updated prior to Mode 2. By procedure, any change to a calculation requires a review of the FSAR to determine its impact. These items were identified midstream between completion of the calculation and doing a review to determine any FSAR impact.NU considers these two issues to be administrative in nature and Significance Level 4.

NU has concluded that items # 1, 2, 3, & 6, in "Comments on Second Response" to Discrepancy Report, DR-MP3-029, do not represent discrepant conditions.

Item # 1. Justification for assumption - The high velocity and the direction of the discharge of recirculation air towards the intake duct opening makes the assumption of mixing of makeup and recirculation air an appropriate assumption which has also been confirmed by observations made during field walkdowns associated with investigations related to this DR. The stratification assumption, taken in conjunction with the mixing assumption, adds conservatism to calculation by minimizing heat transmission through the floor and wall. The evaluation of system and equipment performance/operability is then based on the high temperature computed at the ceiling level even though the equipment are located at the floor level. This is an added conservatism.

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ICAVP Discrepancy Report

Item # 2. Higher room temperatures - The rounding off (up or down) of NMA, MNE and MAE values to the nearest 5°Fis covered in FSARCR 97-MP3-295 and supported by Safety Evaluation S3-EV-97-16.

DR No. DR-MP3-0029

Item # 3. FSAR Section 9.4.0, as revised by FSARCR 97-MP3-295, no longer makes any reference to FSAR Table 2.3-1.

Item # 6. The review of set point calculations of the safety related instruments located in the service water pump cubicles shows that the higher ambient temperatures do not necessitate a change as detailed below:

3SWP*PS27A/B These are Model SB11AKR/TE10A52R ASCO pressure switches. The applicable setpoint calculation is SP-3SWP-16, Rev 1. The calculation includes a setpoint uncertainty for aging, temperature effect, and vibration including seismic DBE of \pm 10% of adjustable operating range. ASCO Qualification Report AQR-101083 specifies an allowable instrument operating temperature range of 0 to 150°F and an overall instrument uncertainty of \pm 10% for the life of the unit. To changes are required to the instrument setpoint calculation.

3SWP*PDIS24A/B/C/D These are Model 224/580A-1 Barton differential pressure indicating switches . The applicable setpoint calculation is SP-3SWP-1, Rev 2. The calculation includes a total setpoint uncertainty value (including allowances for environmental influences) of ± 10%. The Barton Product Bulletin for the 580 Series Nuclear Safety DP Indicating Switch specifies a maximum qualified service condition of 180°F. The bulletin also specifies a maximum LOCA instrument uncertainty of ± 10%.No changes are required to the instrument setpoint calculation.

3HVY*TS60A/B These are Model SA11AKR/QD10A4R ASCO temperature switches. The applicable setpoint calculation is SP-3HVY-8, Rev 0. The temperature switch function is to start 3HVY*FN2A/B on a high service water pump cubicle temperature of 90°F and stop 3HVY*FN2A/B on low service water pump cubicle temperature of 45°F. ASCO Qualification Report AQR-101083 specifies an allowable instrument operating temperature range of 0 to 150°F and an overall instrument uncertainty of ± 10 % for the life of the unit. Since temperatures switch actuation will not be required at elevated temperatures above the 90°F setpoint, no change to the setpoint calculation is required.

The only items related to cubicle mounted electrical equipment that were limiting in nature for the elevated temperatureswere the thermal overload settings and the MCC rating. These items are addressed in the Technical Evaluation (M3-EV-98-0038).

Significance Level criteria does not apply to issues # 1, 2, 3, 4, & 6, as these issues do not represent discrepant conditions. However, the overall significance level of this DR remains a

Printed 5/28/98 10:16:05 AM

Page 4 of 6

Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report	DR No. DR-MP3-0029
	level 4 as described in previous IRFs: 01965	M3-IRF-00418 & M3-IRF-
	Supplement to IRF addressing issue d 2:00 PM conference call:	iscussed on 4/23/98 at
	The FSAR documents the temperature Water Pump cubicles with only one pur remain correct for the one pump runni virtue of this DR, has been determined number of pumps operating in the wor however, demonstrated via a revised of	e limits for the Service imp running. These limits ng condition which, by d not to be the relevant st case condition. NU has, calculation, the capability

condition. NU has, on, the capability of the existing ventilation system without modifications or adjustments, to maintain the cubicle temperature within acceptable limits with the worst case required two pumps operating. Since the license basis of maintaining Service Water availability continues to be met by the existing condition when analyzed using the two (2) pump operating heat loading assumption, NU concludes that this represents a Significance Level 4 discrepancy, involving an error in assumption with no impact on the overall result; i.e., the pump motors and other cubicle-installed equipment will not be presented with an unacceptable environmental condition within which reliable operation is required.

Attachments: FSARCR 97-MP3-295 CR M3-98-1900 M3-EV-98-0038 SE-EV-97-16

Resolution Pending? Yes	No	Non D	iscrepant Conditio	m? Yes	NoNo
Initiator: Stout, M. D. VT Lead: Neri, Anthony A VT Mgr: Schopfer, Don K IRC Chmn: Singh, Anand K Date: 5/27/98		Acceptable	Not Acceptable	Review Needed	Date 5/27/98 5/27/98 5/27/98 5/27/98

SL Comments: Comments on First Response:

Determination of final significance level is pending completion and submittal of calculation and supplemental response from NU.

Comments on Second Response:

1. Calculation SWP-01516M3, Rev. 0 assumes that the temperature in the service water pump cubicles is stratified and that the temperature at floor level is equal to the supply air (mixed air) temperature. Calculation does not provide justification for this assumption.

2. Calculation SWP-01516M3, Rev. 0 results show that the normal maximum average (NMA) of 85°F, maximum normal

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ICAVP Discrepancy Report

DR No. DR-MP3-0029

excursion of 110°F (MNE), and maximum abnormal excursion 120°F (MAE) shown in FSAR Appendix 3B are exceeded by 1°F during normal operation with one pump operating. Response does not evaluate the FSAR changes required to reflect the higher room temperatures.

3. Calculation SWP-01516M3, Rev. 0 did not determine the maximum room temperature with two service water pumps operating with an extreme outdoor air temperature of 103°F as required by FSAR Section 9.4.0. This case appears to have been excluded based on Technical Evaluation M3-EV-98-0038 (item 4.1 on page 3) which did not address the statement in FSAR Section 9.4.0 that refers to the extreme temperatures shown in FSAR Table 2.3-1.

4. Calculation SWP-01516M3, Rev. 0 results with 86°F outdoor air temperature and two service water pumps operating show that the maximum room temperature varies between 103°F at the floor and 119.8°F for the recirculation air. The maximum room temperature of 119.8°F exceeds the design temperature of 104°F stated in FSAR Section 9.4.8.1.1. NU's response should address what action is planned to correct the FSAR.

5. Calculation SWP-01516M3, Rev. 0 results for maximum temperature of 128°F in winter alignment exceed temperatures shown in FSAR Section 9.4.8.1 and Appendix 3B. NU's response should address what action is planned to correct the FSAR.

6. Technical Evaluation M3-EV-98-0038, Rev. 0 does not address what impact the higher temperatures have on instrument setpoint calculations and electrical calculations. NU's response should address this.

Comments on Third Response

NU's correction action plan resolves the technical issues.

This is considered to be Level 3 discrepancies as the service water pump house ventilation system is not able to maintain the maximum temperature below that stated in FSAR Section 9.4.8.1.1 and FSAR Appendix 3B.

The significance level of this DR is the only issue unresolved. The significance level should be resolved by the NRC.

Additional Comments

As directed by the NRC, the DR is being reissued as a confirmed Level 3 discrepancy.

Northeast Utilities	ICAV	P		DR No. DR	-MP3-0035
Aillstone Unit 3	Discrepancy	y Repo	ort		
Review Group:	Operations & Maintenance a	nd Testing	DR RESOL	UTION ACCEPT	TED
Review Element:	Operating Procedure			Potential Opera	bility Issue
Discipline:	Operations			Yes	,
Discrepancy Type:	Licensing Document			O No	
System/Process:	SWP				
NRC Significance level:	3		1	ate FAXed to N	IU:
				Date Publishe	ed: 8/31/97
Discrepancy:	Not all Service Water surveillance procedur	r heat exc re per LE	changers ar R 90-020-0	e included in 0	the
Description:	Licensing event repoi issued as a result of I Pressure Safety Inject surveillance procedur LER stated in part surveillance procedur exchangers has been a heat exchanger are inoperable and the ap Condition of Operation Contrary to the above System heat exchange surveillance procedur SP 3626.13, Service Determination, Rev 1 1, 1997. This proced established limits for Containment Recircu Containment Recircu	rt (LER) 9 poth train: tion being re. The c "To prev re coverin changed exceede propriate ons Action e commit gers are in re. The a Water He 5, Chang ure does the follow lation Heil lation Heil	00-020-00 d s of Quencl g inoperable orrective ad rent the rec- ng all Service . When the d the unit we rechnical is Statement ment, not al included in t pplicable su eat Exchang at Exchang at Exchang at Exchang	ated July 16, h Spray and l e due to a de ction section urrence, the ce Water Sys e established vill be declare Specification at entered" Il Service Wa he applicable urveillance p gers Fouling effective dat e any referen cchangers: er, 3RSS*E1 er, 3RSS*E1 er, 3RSS*E1	A 1990 was High of this stem heat limits for ed Limiting ater erocedure is te of April ce to or A B C
	Containment Recircu	lation He	at Exchang	er, 3RSS*E1	D
	Post Accident Sampli	ing Samp	e Cooler, 3	Review	
		Valid	Invalid	Needed	Date
Initiator:	Spear, R.				8/22/97
VT Lead:	Bass, Ken				8/22/97
VT Mgr:	Schopfer, Don K				8/25/97
IRC Chmn:	Singh, Anand K				8/29/97
Date:					
INVALID:					
Date:	5/27/98		an chul ann an Annaichean an Annaichean an Annai		
RESOLUTION:	Disposition:				

NU has concluded that the issue reported in Discrepancy Report, DR-MP3-0035, does not represent a discrepant condition. Millstone Unit 3 has a history of mussel fouling of the service water heat exchangers. Upgrades and corrective actions to address mussel fouling include: new hypochlorite metering pumps; weekly surveillance of active or filled heat exchangers (3626.13); scheduled preventative maintenance and inspection on heat exchangers per EN 31084 (revision 3 attached); and,

ICAVP Discrepancy Report

development of a Special Procedure (SPROC 96 3-07) to flush the RSS heat exchangers on a quarterly basis. In addition, prompted by corrective actions for ACR 02994, permanent screens on the inlet of the RSS heat exchangers are scheduled to be installed during RFO6. Currently, during flushes these are installed, procedurally controlled and then removed. The corrective actions on LER 90-020-00 were intended to include the requirements of Generic Letter 89-13. GL 89-13 was issued to address safety related portions of the Service Water system. Post Accident Sampling System sample cooler, 3SSP-SCL3, is not safety related nor is it QA. It does not fall under the requirements of GL 89-13. 3SSP-SCL3 is kept in dry lav-up (i.e. not filled) so it is not as susceptible to fouling. The RSS heat exchangers are not included in 3626.13 for the following reasons:1. The service water side of the heat exchangers are kept in dry lay-up (i.e. not filled) during normal operating conditions. Fouling cannot occur in a dry system.2. The heat exchangers are surveilled for fouling during ESF / LOP testing each refueling (3646A.17 and 3646A.18 step 4.4.26.)3. The system is flow tested quarterly, and is completely flushed per SPROC 96-3-07.4. 3626.13 is a weekly surveillance. Significant bio-fouling of large bore upstream piping will not occur over a quarter, therefore, a quarterly inspection cycle is sufficient. Significance level criteria do not apply here as this is not a discrepant condition.

Conclusion:

NU has concluded that the issue reported in Discrepancy Report, DR-MP3-0035, does not represent a discrepant condition. Surveillance Procedure 3626.13 surveils all service water heat exchangers except for the PASS sample cooler and the RSS heat exchangers. The PASS sample cooler is not a safety related component and as such, does not fall under the requirements of GL 89-13. The RSS heat exchangers are surveilled and inspected under ESF / LOP Testing Surveillance (3646A.17 and 3646A.18 step 4.4.26.) and the regular quarterly preventative maintenance schedule. Significance level criteria do not apply here as this is not a discrepant condition.

Revised Disposition and Conclusion:

Disposition:

NU has concluded that Discrepancy Report DR-MP3-0035 does not represent a discrepant condition. Surveillance Procedure 3626.13 surveils all service water heat exchangers except for the PASS sample cooler and the RSS heat exchangers. The PASS sample cooler is not safety-related and does not fall under the requirements of Generic Letter 89-13, additionally it is maintained in a dry lay-up condition. The RSS heat exchangers are kept in dry lay-up so they are not susceptible to fouling. The RSS heat exchangers are surveilled and inspected each refuel under ESF/LOP Surveillance (3646A.17 and 3646A.18 step 4.4.26) and the regular quarterly preventative maintenance schedule to ensure no biofouling exists in stagnate leg piping

ICAVP Discrepancy Report

upstream of the heat exchanger.

In their response to M3-IRF-00301, Sargent & Lundy noted that no determination is made after the RSS heat exchangers are flushed as to whether they are functional considering the amount of debris removed and if the periodicity of the flushes is appropriate. Sections 1.3.1 and 1.3.2 of EN31084, Operating Strategy For Service Water System At Millstone Unit 3, require the Containment Recirculation Spray Heat Exchangers to be flushed and inspected 4 times a year using SPROC 96-3-07. Frequency of performing the flushes is tracked automatically by PMMS and AWO's are issued when the need for flushes becomes due. Permanent inlet debris screens have been installed in the inlet of each heat exchanger (DCR M3-97111). Inlet heat exchanger screens are used since the service water side of the heat exchangers are kept in dry lay-up (i.e. not filled) during normal operating conditions. Fouling cannot occur in a dry system. EN31084 requires a formal assessment (Attachment 4 of the procedure) of the amount of captured mussels on the inlet screens relative to the heat exchanger performance. If the flush criteria for foreign material is exceeded, a Condition Report must be issued (per RP-4) which in turn will require an operability assessment to be performed. Thus, the effectiveness of the flushing and the frequency of flushes is assessed by the System Engineer using this method. As stated in the MP3 Service Water System Heat Exchanger Performance Monitoring Program, heat transfer surveillances or performance testing of the RSS heat exchangers is not required. The RSS system configuration precludes inducing a heat load across the heat exchangers such that meaningful test data can be obtained. However, the RSS heat exchangers are inspected regularly as described above.

CR M3-98-1693 evaluated the additional issue raised by S&L concerning micro-fouling inspection criteria contained in EN 31084, rev. 3. Micro-fouling inspection criteria is considered to be important since the heat transfer capability of each RSS heat exchanger cannot be verified by performing a test due to the unique system configuration of the RSS. Each RSS heat exchanger is flushed and inspected at least 3 times a year as required by EN 31084. Following each flush of the heat exchanger (per SPROC 96-3-07), which utilizes service water, the heat exchanger is then isolated and completely filled with demineralized water in accordance with OP 3326, section 4.7. After filling, the heat exchanger is drained and then restored to the RSS system in dry lay-up. Formation of any scale or other micro-fouling condition/deposit is thus significantly minimized by the combination of flushing with service water and then filling and draining with demineralized water. Furthermore, the piping configuration for RSS is such that no significant heat load can be applied (or has ever been applied) across the heat exchanger tubes, consequently there is no heat mechanism present for developing scale. However, to ensure the ability of each RSS heat exchanger to perform its safety function as designed, the visual inspection requirements in EN 31084 will be enhanced (A/R 98008002-01) to include (1) reviewing previous inspection

ICAVP Discrepancy Report

results prior to performing each inspection so that any changes can be readily identified and (2) bullets to advise inspector to inspect in accordance with ASME OM-S/G-1994, part 21. Significance Level Criteria does not apply as this is not a discrepant condition.

DR No. DR-MP3-0035

Conclusion:

NU has concluded that Discrepancy Report DR-MP3-0035 does not represent a discrepant condition. Surveillance Procedure 3626.13 surveils all service water heat exchangers except for the PASS sample cooler and the RSS heat exchangers. The PASS sample cooler is not a safety related component and Generic Letter 89-13 therefore does not apply. The RSS heat exchangers are surveilled and inspected for micro-fouling each refueling per ESF/LOP Testing Surveillance (3646A.17 and 3646A.18) and quarterly per SPROC 96-3-07. Any foreign material removed from the RSS heat exchanger inlet screens is evaluated in accordance with EN 31084 for any effect on the performance of the heat exchangers. Prior to being placed in dry lay-up during normal plant operations, each RSS heat exchanger is visually inspected for micro-fouling after the service water flush and then filled with demineralized water and drained. The fouling inspection of EN 31084 will be enhanced (A/R 98008002-01) to require review of the previous inspection results prior to performing the next inspection and trending the inspection results to evaluate the heat exchanger condition. Significance Level Criteria does not apply as this is not a discrepant condition.

NU's revised response:

Disposition:

NU has concluded that Discrepancy Report DR-MP3-0035 does not represent a discrepant condition. Surveillance Procedure 3626.13 surveils all service water heat exchangers except for the PASS sample cooler and the RSS heat exchangers. The PASS sample cooler is not safety-related and does not fall under the requirements of Generic Letter 89-13. The RSS heat exchangers are kept in dry lay-up so they are not susceptible to fouling. The RSS heat exchangers are surveilled and inspected each refuel under ESF/LOP Testing Surveillance (3646A.17 and 3646A.18 step 4.4.26) and the regular quarterly preventative maintenance schedule.

In their response to M3-IRF-00301, Sargent & Lundy noted that no determination is made after the RSS heat exchangers are flushed as to whether they are functional considering the amount of debris removed and if the periodicity of the flushes is appropriate. Sections 1.3.1 and 1.3.2 of EN31084, Operating Strategy For Service Water System At Millstone Unit 3, require the Containment Recirculation Heat Exchangers to be flushed and inspected 4 times a year using SPROC 96-3-07. Frequency of performing the flushes is tracked automatically by PMMS and AWO's are issued when the need for flushes becomes due. Permanent inlet debris screens have been installed in the inlet of

Page 4 of 6

ICAVP Discrepancy Report

each heat exchanger (DCR M3-97111). Inlet heat exchanger screens are used since the service water side of the heat exchangers are kept in dry lay-up (i.e. not filled) during normal operating conditions. Fouling cannot occur in a dry system. EN31084 requires a formal assessment (Attachment 4 of the procedure) of the amount of captured mussels on the inlet screens relative to the heat exchanger performance. If the flush criteria for foreign material is exceeded, a Condition Report must be issued (per RP-4) which in turn will require an operability assessment to be performed. Thus, the effectiveness of the flushing and the frequency of flushes is assessed by the System Engineer using this method.

As stated in the MP3 Service Water System Heat Exchanger Performance Monitoring Program, surveillance or performance testing of the RSS heat exchangers is not required. The RSS system configuration precludes inducing a heat load across the heat exchangers such that meaningful test data can be obtained. However, the RSS heat exchangers are inspected regularly as described above.

CR M3-98-1693 evaluated the additional issue raised by S&L concerning micro-fouling inspection criteria contained in EN 31084, rev. 3, and concluded additional inspection criteria are not required. Micro-fouling inspection criteria is considered to be important by S&L since the heat transfer capability of each RSS heat exchanger cannot be verified by performing a test due to the unique system configuration of the RSS. However, each RSS heat exchanger is flushed and inspected at least 3 times a year as required by EN 31084. Following each flush of the heat exchanger (per SPROC 98-3-07), which utilizes service water, the heat exchanger is then isolated and completely filled with demineralized water in accordance with OP 3326, section 4.7. After filling, the heat exchanger is drained and then restored to the RSS system in dry lay-up. Formation of any scale or other micro-fouling condition/deposit is thus significantly minimized by the combination of flushing with service water and then filling and draining with demineralized water. Furthermore, the piping configuration for RSS is such that no significant heat load is applied (or has ever been applied) across the heat exchanger tubes, consequently there is no heat mechanism present for developing scale. Hence additional micro-fouling criteria is not warranted. Significance Level Criteria does not apply as this is not a discrepant condition.

Conclusion:

NU has concluded that Discrepancy Report DR-MP3-0035 does not represent a discrepant condition. Surveillance Procedure 3626.13 surveils all service water heat exchangers except for the PASS sample cooler and the RSS heat exchangers. The PASS sample cooler is not a safety related component and Generic Letter 89-13 therefore does not apply. The RSS heat exchangers are surveilled and inspected each refueling per ESF/LOP Testing Surveillance (3646A.17 and 3646A.18) and quarterly tested per SPROC 98-3-07. Any foreign material removed from the RSS heat exchanger inlet screens is evaluated in accordance with EN 31084 for any effect on the

ICAVP Discrepancy Report

DR No. DR-MP3-0035

parformance of the heat exchangers. Inspection for micro-fouling is also performed. Significance Criteria does not apply as this is not a discrepant condition. Previously Identified by NU? O Yes No No Non Discrepant Condition? Yes No Resolution Unresolved? Yes Resolution Pending? Yes No No No Review Not Acceptable Acceptable Date Needed Initiator: Spear, R. 5/27/98 \boxtimes VT Lead: Bass, Ken \boxtimes 5/27/98 VT Mgr: Schopfer, Don K 5/27/98 IRC Chrmn: Singh, Anand K 5/27/98 Date: 5/26/98 SL Comments: S&L concurs that the additional information provided by NU is adequate to resolve this issue. The additional information provided in AR No. 98008002 indicating that EN 31084 will be revised to include the requirement to note fouling/condition indications during visual inspections and to include the guidance provided in the ASME OM-S/G-1994 Standard, Part 21 Section C9.1 for visual inspection technique will resolve this issue. S&L does consider this to be a level 3 discrepancy. This determination is based on the information contained in M3-IRF-02279 when NU stated that EN 31084 will be enhanced to include reviewing previous inspection results prior to perform each inspection (trending) so that any changes can be readily identified and to advise the inspector to inspect in accordance with the referenced OM Standard and the commitment made in the referenced AR. Both of these actions were taken after the ICAVP discovery date. S&L understands that NU has agreed to further revise the Basis

S&L understands that NU has agreed to further revise the Basis document of EN 31084 to state the inspection of the Containment Recirculation Heat Exchangers described in EN 31084 provide the compliance with GL 89-13.

Northeast	t Utilities
Millstone	Unit 3

ICAVP Discropancy Roport

Review Group:	System	DR RESOLUTION ACCEPTED
Review Element:	System Design	
Discipline:	Piping Design	Potential Operability Issue
Discrepancy Type:	Calculation	Yes
System/Process:	RSS	• No
NRC Significance level:	4	Date F&Xed to NU:
		Date Packet to No.
		Date Published: 8/29/97
Discrepancy:	Incorrect operating t	emperature used in stress analysis.
Description:	In the process of rev for the Recirculation	viewing the following pipe stress calculations Spray System,
	(i) Calculation No. 12 5/29/97	2179-SDP-RSS-01361M3 Rev. 4, dated
	 (ii) Calculation No. 1 (iii) Calculation No. (iv) Calculation No. (v) Calculation No. 1 (vi) Calculation No. 	2179-NS(B)-X7902 Rev. 1, dated 9/3/96 12179-NS(B)-X7903 Rev. 1, dated 9/3/96 12179-NS(B)-X7904 Rev. 2, dated 9/3/96 12179-NS(B)-X7905 Rev. 1, dated 9/3/96 12179-US(B)-353 Rev. 0, dated 4/23/97
	we noted the following	ng discrepancy:
	Background:	
	Based on the stress the operating process RSS-010-10-2 is 253 lines is 150 psig. This which is described a Pumps take suction and discharge to the service water cooling 3RSS*E1 A& C resu discharging hot sum the unaffected RSS water to the headers calculations X7903 a	data package (i), under operating condition 7 is temperature for lines 3-RSS-010-5-2 and 3- 7 deg F. The corresponding pressure in these is is an Emergency & Faulted condition is follows - 'Containment Recirculation from the Containment Recirculation Sump is spray headers. A failure of one train of g to the Containment Recirc Coolers lits in the affected RSS train (E1A, C) p water (257 deg F) to the ring headers and train (E1B, D) discharging cooled sump b'. The two RSS lines are analyzed in and X7905.
	Since a failure of eith be considered, the s 150 psig needs to be RSS-010-9-2. These X7902 and X7904.	her train of service water (A or B) needs to ame operating condition of 257 deg F, and considered for lines 3-RSS-010-20-2 and 3- two lines are analyzed in calculations
	The four pipe stress maximum operating the maximum contai calculated in (vi).	analysis calculations (ii) to (v), utilize a temperature of 245 deg F. This represents inment recirc piping temperature, as
	Discrepancy:	
1	The pipe stress calc package, and have r (4) of the stress data	ulations utilize Rev. 3 of the stress data not been updated to reflect the latest revision package (i). As such, there is a

DR No. DR-MP3-0081 ICAVP **Northeast Utilities Millstone Unit 3 Discrepancy Report** descrepancy between the 257 deg F defined in the stress data package (i) and the 245 deg F defined in references (ii) thru (vi). Review Valid Invalid Date Needed 8/20/97 Initiator: Singh, R. \boxtimes 8/20/97 VT Lead: Neri, Anthony A \boxtimes VT Mgr: Schopfer, Don K 8/22/97 8/25/97 IRC Chmn: Singh, Anand K \boxtimes Date: INVALID: Date: 5/27/98

RESOLUTION: First Response ID: M3-IRF-00293

Disposition:

NU has concluded that Discrepancy Report DR-MP3-0081 does not represent a discrepant condition. Although pipe stress calculations 12179-NS(B)-X7902, X7903, X7904, and X7905 all reference Revision 3 of the RSS Stress Data Package, all were revised as a result of the increased RSS pipe fluid temperatures, as stated in the 'Basic Analytical Data Summary' page contained in each calculation (see attached, page 21 of calculation NP(B)-X7902).

These calculations also state, under 'Changes to Existing Calculation-Operating Conditions', how the criteria for maximizing stresses and support loads were developed (see attached pages 12 and 13 of the sample calculation). Details explain that the two worst case postulated LOCA combinations developed by the Nuclear Technologies Group were used in the calculations. The worst case scenarios did not require the 257°F temperature, but required evaluation for temperatures of 230°F and 245°F, based on time phasing of containment structure movements. Revision 4 of SDP-RSS-01361M3 also states that re-analysis of the piping system was in progress during review and update of the SDP (See attached page 5 of the SDP).

Conclusion:

NU has concluded that Discrepancy Report DR-MP3-0081 does not represent a discrepant condition. Pipe stress calculations 12179-NS(B)-X7902, X7903, X7904, and X7905 were worked in parallel with the RSS stress data package, with the result that the calculations did not reference Revision 4 of the RSS SDP. The pipe stress calculations, as issued, correctly account for the latest increase in RSS temperature which is now defined in Revision 4 of the RSS SDP.

Second Response Response ID: M3 - IRF -01963

ICAVP Discrepancy Report

Disposition:

NU has concluded that the issue reported in DR-MP3-0081 has identified a condition not previously discovered by NU which requires correction. CR M3-98-1998 has been initiated to address this issue. The issue of utilizing the proper revision of the SDP is not a discrepant condition.

Although pipe stress calculations 12179-NP(B)-X7902, X7903, X7904, and X7905 all reference Revision 3 of the RSS Stress Data Package, all were revised as a result of the increased RSS pipe fluid temperatures, as stated in the 'Basic Analytical Data Summary' page contained in each calculation (see attached, page 21 of calculation NP(B)-X7902).

These calculations also state, under 'Changes to Existing Calculation-Operating Conditions', how the criteria for maximizing stresses and support loads were developed (see attached pages 12 and 13 of the sample calculations). Details explain that the two worst case postulated LOCA combinations developed by the Nuclear Technologies Group were used in the calculations. The worst case scenarios did not require the 257 °F temperature, but required evaluation for temperatures of 230 °F and 245 °F, based on time phasing of containment structure movements. Revision 4 of SDP-RSS-01361M3 also states that re-analyzes of the piping system was in progress during review and update of the SDP (See attached page 5 of the SDP).

Regarding the S&L comment subsequent to NU's initial response that the current stress analysis calculations do not address the discrepancy between the 230 °F and 245 °F cases analyzed in the stress calculation and the 257 °F case identified in the SDP, the following explanation is provided. Calculations 03705-US(B)-352 and 353 analyze a family of accident scenarios for RSS piping inside containment to determine the bounding conditions for pipe stress and support loading. The 230 °F and 245 °F cases are based on detailed analysis of worst case accident scenarios crediting delay time for RSS system initiation. These calculations demonstrate that the ambient temperature effects on the piping are more severe than the fluid temperatures resulting from a loss of SWP.

The 257 °F piping temperature specified in the SDP due to the loss of SWP in one train is based on calculation 12179-US(B)-322 which determines the maximum sump water temperature for worst case accident scenarios. The 257 °F temperature is conservative for piping analysis since it occurs early in the accident scenario prior to RSS initiation (i.e. prior to system flow). At the time of RSS initiation, the calculation determines a sump temperature of 250 °F. However, this 250 °F case is a result of minimum ESF such that the sump temperature is maximized due to the loss of one train of QSS. This scenario involves a single failure which is independent of the loss of SWP case. The sump temperatures resulting from the loss of SWP case are lower due to the cooling effect of two operating QSS pumps. The temperatures calculated during fluid flow conditions for the loss of SWP case are bounded by the piping

ICAVP Discrepancy Report

temperatures reached due to ambient conditions prior to RSS flow initiation. Therefore, the more realistic temperatures calculated in 03705-US(B)-352 and 353 are utilized in the piping analysis. The SDP calculation will be revised accordingly to address the apparent discrepancy.

Based on the administrative nature of this issue and the fact that the conclusions of the calculation remain unchanged, Significance Level of 4 is appropriate.

Conclusion:

NU has concluded that the issue reported in Revised Discrepancy Report DR-MP3-0081 has identified a condition not previously discovered by NU which requires correction. The maximum operating temperature of 257F provided in the stress data package, 12179-SDP-RSS-01361M3, rev. 4, is not consistent with the operating temperatures used in the stress analysis calculations. The approved corrective action plan for CR M3-98-1998 will revise after startup the stress data package to clarify the maximum temperature resulting from the loss of SWP post LOCA and will also revise calculation 03705-NP(B)-003 to clearly document the bases for the 230F and 245F temperatures used in the stress analyses. Based on the fact that the conclusions of the stress analyses remain unchanged, the Significance Level is concluded to be Level 4.

Attachments:

CR M3-98-1998 with approved corrective action plan Calculation 12179-NP(B)-X7902 pages 12, 13, 14 and 21 Stress Data Package SDP-RSS-01361M3 page 5

Third Response Response ID: M3 - IRF - 02356

Background:

Sargent & Lundy has requested, by telecon, clarification of why the maximum containment sump temperature of 257F was not used in the inside containment RSS piping stress analyses when this temperature is identified in the SDP as the maximum temperature.

Disposition:

NU has concluded this issue reported in DR-MP3-081 has identified a CONFIRMED SIGNIFICANCE LEVEL 4 condition which requires correction. Previously the stress calculations assumed that the ambient temperature conditions caused by DBA events enveloped the uncooled fluid conditions for the purpose of developing the most limiting pipe stress and support loading. In general, this is the case since the ambient temperature exceeds the worst case sump temperature once RSS flow is initiated. An Engineering study calculation (03705-NP(B)-003, rev. 0, CCN 2, attached) demonstrates that,

ICAVP Discrepancy Report

DR No. DR-MP3-0081

considering all the appropriate boundary conditions (containment pressure and liner temperature), the ambient condition bounds the uncooled flow condition with the exception of the ring headers. The maximum temperature condition in the ring headers is governed by the DBA ambient temperature. However, the ring headers were reanalyzed to address a variety of interface conditions unique to the ring headers (i.e. uncooled flow meeting cooled flow in each ring header) to demonstrate the integrity of the piping and pipe supports. Design basis calculation revisions/CCNs (attached) were performed for the cooled/uncooled fluid conditions in the ring headers only and for the associated sixteen structural anchors. The balance of the supports in the ring headers (non-anchors) were not significantly affected by the cooled/uncooled fluid conditions and are therefore addressed within the associated stress calculations. The Engineering Study Calculation addresses the balance of the commodities which are not affected by the cooled/uncooled flow consideration, including the riser stress problems. The revised calculations demonstrate that the RSS piping meets design basis criteria for DBA events. No modifications were required due to this reanalysis. The approved corrective action plan for CR M3-98-1998 will revise after startup the stress data package to ciarify the maximum temperature to be used in the stress analyses. Since the conclusions of the stress analyses remain unchanged. the Significance Level is concluded to be Level 4.

Note: The calculations noted as being attached have been shipped from the Stone & Webster office in Boston to Sargent & Lundy to expedite their review and can be identified either by the packing slip referencing both DR-MP3-0081 and M3-IRF-02356 or by the transmittal number: M3-TRA-00306.

Conclusion:

NU has concluded this issue reported in DR-MP3-081 has identified a CONFIRMED SIGNIFICANCE LEVEL 4 condition which requires correction. The maximum temperature of 257F provided in the stress data package for RSS is not the maximum temperature to be used in the stress calculations. The attached calculations provide clarification as to the maximum temperature to be used. The corrective action plan for CR M3-98-1998 will revise after startup the stress data package to clarify the maximum temperature post LOCA. Since the conclusions of the stress analyses remain unchanged, the Significance Level is concluded to be Level 4.

Attachments:

Engineering Study	Calc. 03705-NP(B)-003	RO	C2	
Large Bore Stress	12179-NP(B)-X7918	R1	C2	
Large Bore Stress	12179-NP(B)-X7912	R1	C2	
Pipe Support Calc	12179-NP(F)-Z079C-079	R3	C 2	
Pipe Support Calc	12179-NP(F)-Z079C-089	R2	C 2	
Pipe Support Calc	12179-NP(F)-Z079C-090	R3	C2	
Pipe Support Calc	12179-NP(F)-Z079C-093	R2	C 3	
Pipe Support Calc	12179-NP(F)-Z079C-094	R1	C3	

Northeast Utilities Millstone Unit 3	ICA Discrepan	VP cy Report	DR No. D	DR No. DR-MP3-008		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-097 R	3 C 4		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-098 R	3 C 4		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-101 R	1 C4		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-102 R	1 C 3		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-105 R	3 C 2		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-108 R	4 C2		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-109 R	1 C 3		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-112 R	3 C 2		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-113 R	4 C2		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-116 R	1 C 3		
	Pipe Support Calc.	12179-NP(F)-Z0	79C-117 R	1 C 3		
	Insert Plate Calc.	12179-SEO-V1.	006 R	3 C1		
	Insert Plate Calc.	12179-SEO-V1.	007 R	3 C1		
	Insert Plate Calc.	12179-SEO-V1.	011 R	2 C1		
	Insert Plate Calc.	12179-SEO-V1.	093 R	1 C1		
	Insert Plate Calc.	12179-SEO-V1.	095 R	1 C1		
Previously Identified by NU?	🔿 Yes 🔘 No	Non Discropant (Condition? Y	res 🔘 No		
Resolution Pendin	g? Yes 🖲 No	Resolution Un	resolved?	res 🖲 No		
		Acceptable Not Acce	Review	d Date		
Initiator:	Prakash, A.			5/27/98		
VT Lead:	Neri, Anthony A		Н	5/27/08		
VT Mgr:	Schopfer, Don K		Н	5/27/00		
IRC Chmn:	Singh, Anand K		Н	0/2/190		
Date:	5/27/98					
SL Comments:	First Response:					

NU's disposition states that the discrepancy report does not represent a discrepant condition because the calculation adequately explains how the criteria for maximizing stresses and support loads were developed, and the two worst case postulated LOCA combinations developed by the Nuclear Technologies Group (NTG) are utilized.

According to page 13 of the calculation, the finalized LOCA scenarios, as developed by the NTG, are documented in calculation 03705-US(B)-353. The two worst postulated LOCA scenario combinations (P02 and P24) were transmitted by NTG to the piping analysis group. Corresponding pipe temperatures for these two cases are 230F and 245F.

At issue is the fact that the Stress Data Package (SDP) specifies a maximum operating temperature of 257F for the subject piping. The disposition states that 'the worst case scenarios did not require the 257F temperature, but required evaluation for temperatures of 230F and 245F based on time phasing of containment structure movements'. This statement is not substantiated by calculation 03705-US(B)-353. None of the scenarios considered in the calculation lead to a pipe temperature of 257F. This is because the spray water outlet temperature of the recirculation spray heat exchanger RSHX [TDV300] as a function of time in all scenarios considered is taken to be cooled sump water from the RSHX. The scenario leading to the 257F temperature corresponds to the RSHX discharging hot sump

ICAVP Discrepancy Report

water due to a failure of one train of service water cooling. This scenario is not considered by calculation 03705-US(B)-353.

The SDP specifies the 257F temperature for operating condition 7A/B. Condition 7 addresses one-half of the RSS coolers discharging hot, and one-half of the coolers discharging cooled sump water to the spray headers. The operating temperature for the spray header receiving cooled water is taken from calculation US(B)-353, as noted in Notes 1 and 3 of the SDP. The operating temperature for the spray header receiving hot sump water is 257F. Although the source for the 257F is not provided in the SDP, the SDP does reference calculation US(B)-322 (Ref. 7a). This calculation states that 'if the heat exchanger fails, then the piping of the recirculation spray system will be exposed to water at the temperature of the water on the floor', and provides the maximum temperature of the water on the floor as 256.9F.

According to the SDP: 'The SDP provides the system specification information required to perform the code piping stress analysis and therefore represents a design input document for the pipe stress calculation. The SDP forms the basis for the input to the structural analysis of safety related piping systems and mechanical components. The SDP is reviewed for consistency with design basis assumptions regarding flowpath, single failure postulation, and operator action'.

The discrepant condition is that the maximum operating temperature provided in the SDP, a design input to the stress analysis calculation, is not consistent with the operating temperature used in the stress analysis calculations. Either the SDP should be revised to reflect the logic delineated in the stress analysis calculations, or the stress calculations should address the discrepancy. The current stress analysis calculations do not address the identified discrepancy.

Second Response (Telecon):

S&L requested clarification of why the maximum containment sump temperature of 257F was not used in the inside containment RSS piping stress analyses when this temperature is identified in the SDP as the maximum temperature.

Third Response:

Based on a review of the revised calculations, we concur with NU on the following:

 the RSS piping meets design basis criteria for DBA events
 the approved corrective action plan CR M3-98-1998 to revise, after startup, the stress data package to clarify the maximum temperature used in stress analyses

ICAVP Discrepancy Report

Significance Level can be changed to Level 4

For the sake of clarifying the documentation, the following suggestions are noted:

- Several support summaries attached to the pipe support calculations do not include the SSEA loads. The loads are, however, included in the computed load combinations. The support numbers are, 3RSS-1-PSA93, 94, 97, 98, 109, 112 & 113.

- Calculation NP(B)-003 states that "a representative RSS riser stress calculation X7905 was selected for all riser qualifications since it is very similar in overall piping configuration and support arrangement as the other RSS riser problems". The discussion should be expanded to address why the X7903 problem, the benchmark problem used before, is not used in this CCN evaluation. Of significance is the fact that the stainless steel grades in these two cases are different, and have different code allowable stresses.

- Static anchor displacements resulting from the design conditions being anlyzed are based on structural stiffness for a completely cracked concrete model of the containment. This, and its implications for the conclusion should be addressed in the calculation.

- For supports, RSS-1-PSA079 & 089, the welded attachment calculation (PILUG) output has a warning - "max beta = 0.874, results require confirmation". Confirmation of the results should be dispositioned in the calculations.

Northeast Utilities	ICAVP	DR No. DR-MP3-0161
Millstone Unit 3	Discrepancy Repo	rt
Review Group:	Operations & Maintenance and Testing	DR RESOLUTION ACCEPTED
Review Element:	Operating Procedure	Potential Operability Issue
Discipline:	Operations	O Yes
Discrepancy Type:	O & M & T Procedure	No
System/Process:	SWP	
NRC Significance level:	NA	Date FAXed to NU:
		Date Published: 9/22/97
Discrepancy:	Flood Prote the in Procedures an Requirements Discrepancy	nd Technical Specification
Description:	Tech. Spec. section 3.7.6, Floo for Operation (LCO), states that provided for the service water when the water level exceeds datum, at the Unit 3 intake strue all times.	od Protection, Limiting Condition at flood protection shall be pump cubicles and components 13 feet Mean Sea Level, USGS acture. This LCO is applicable at
	The associated action stateme feet above Mean Sea Level, U structure, shut the watertight do cubicles within 15 minutes."	nt is "With the water level at 13 ISGS datum, at the Unit 3 intake oors of both service water pump
	The surveillance requirements protection LCO are:	associated with the flood
	1. Measurement at least once is below elevation 8 feet above 2. Measurement at least once is equal to or above elevation USGS datum.	per 24 hours when the water level e Sea Level, USGS datum. per 2 hours when the water level 8 feet above Mean Sea Level,
	The following listed procedures requirement:	s implement the flood protection
	 SP3665.1 Rev. 5, Flood Level OPS Form 3665.1-1 Rev. 5, 1 AOP 3569 Rev. 10, Severe V SP 3670.2 Rev. 8, Tech Spector OPS Form3670.2-6 Rev. 7, S (Mode 1-4) SP 3672.3 Rev. 4, Tech Spector OPS Form 3672.3-3 Rev. 4, Rounds (Mode5/6) 	el Determination Flood Level Determination Weather Conditions c Related PEO Rounds (Mode 1-4 Shift Outside PEO Tech Rounds c Related PEO Rounds (Mode 5/6 Shiftly Outside PEO Tech Spec
	Three flood protection requirer	ment discrepancies were identified
	1. No procedural guidance exit protection program actions to a determined to be equal to or g sea level, USGS datum as doo Rev. 5. Section 7, Summary Flood Level Determination, id in revision 5 of this procedure taken if water level exceeds 13 actions are dealt with in EOP	sts that describes the flood be taken when the water level is reater that 13 feet above mean cumented in OPS Form 3665.1-1 of changes, of SP3665.1 Rev. 5, lentifies one of the changes made as "References to the actions 3 feet have been removed. Thes 3569, Severe Weather

Northeast	t Utili	ties
Millstone	Unit	3

ICAVP Discrepancy Report

DR No. DR-MP3-0161

does not exist. This was confirmed by referencing Unit 3 Emergency Operating Procedures Index, 2500 Procedure Index, Rev. 141 dated 5/20/97. Procedure AOP 3569 Rev. 10, Severe Weather Conditions, does exist and may be the correct reference rather than EOP 3569. This AOP does not adequately identify the Tech Spec required actions to be taken if the water level reaches or exceeds 13 feet.

The performance requirements identified in the Tech. Specs. are not adequately translated into the referenced operating/surveillance procedures.

2. Page 2 of Procedure SP3665.1 Rev. 5, Flood Level Determination, states in the box identified as Basis Information, "This monitoring is required every 2 hours even if the watertight doors and the normal sump drains are closed. No exemption is provided in T/S 4.7.6.b which would allow cerre ation of monitoring". Page 3 of the same procedure states in the box identified as CAUTION, "With sea level approaching 13 feet above mean sea level weather conditions may warrant entering T/S 3.7.6 LCO and discontinue surveillance until conditions allow". These statements are in direct conflict.

Page 5, Step 5 of Procedure AOP 3569 Rev. 10 required the operator to "Monitor sea water level at the intake structure hourly until wind speed exceeds 50 mph." This step is not consistent with OPS Form 3665.1-1 Flood Level Determination which requires that the water level is recorded every two hours. If the operator ceases to monitor the sea level when the winds exceed 50 MPH the required 'Tech Spec surveillance that is described in SP 3665.1 Flood Level Determination and OPS Form 3665.1-1 Flood Level Determination and OPS Form 3665.1-1 Flood Level Determination may be missed if the water level is high during high wind conditions.

These procedures appear to be contradictory and may preclude the service water system from being monitored in accordance with the Technical Specification during high winds and/or flooding conditions.

3. Tech. Spec. section 3.7.6, Flood Protection, requires determination of water level referenced to "Mean Sea Level, USGS datum, at the Unit 3 intake structure. We were unable to determine from the documentation provided, what type instrument was used to determine the mean sea level, specifically where the instrumentation is located, or how the instrumentation is calibrated and referenced to the USGS datum.

		Valid	Invalid	Needed	Date
Initiator:	Spear, R.				9/17/97
VT Lead:	Bass, Ken				9/17/97
VT Mgr:	Schopfer, Don K				9/18/97
IRC Chmn:	Singh, Anand K				9/18/97

Date:

INVALID:

ICAVP Discrepancy Report

D. 5/26/98

RESOLUTION: Disposition:

NU has concluded that the issue reported in Discrepancy Report, DR-MP3-0161, identified multiple conditions. Items 1 and 3 of the DR do not represent discrepant conditions. Item 2 was an apparent discrepant issue previously identified by NU which did not require correction.

1. SP 3665.1 is entered when it is identified that Long Island Sound level is greater than eight feet above mean sea level. SP 365.1 has procedural guidance for actions that should be taken when the intake is threatened by rising sea level. Upon notification from CONVEX of a hurricane advisory, AOP 3569 is entered. Steps 5, 6 and 7 of AOP 3569 are the procedure steps that implement the actions of Tech Spec 3.7.6. These actions are taken prior to level exceeding 13 feet. The reference to EOP 3569, Severe Weather Conditions, exists only in the Basis Document of SP 3665.1 and not in the procedure itself. A procedure Feedback Form, DC1 Att. 10, was submitted to the procedures group to reference the correct procedure, AOP 3569.

2. CR M3-97-1613 was written 5/23/97 to document the inconsistency between AOP 3569 and Tech Spec 3.7.6 requirements of monitoring sea level. The investigation determined that the condition was not adverse. SP 3665.1 implements the surveillance requirements of Tech Spec 3.7.6 to ensure that the appropriate action statement is met when conditions require it. Further, AOP 3569 provides guidance to refer to Tech Spec 3.7.6 for applicability and monitor sea level hourly until wind speed exceeds 50 mph. Subsequent steps perform the actions of Tech Spec 3.7.6. At the Shift Manager's discretion or when winds exceed 50 mph, monitoring can be suspended by entering the action statement and verifying the watertight doors and sump drains are closed. This would be the logical course of action to ensure personne! and plant safety. The basis information in SP 3665.1 is referring to only performing the actions of the Tech Spec. That alone does not exempt us from performing the surveillance requirements. In order to suspend the surveillance requirement, the action must be taken and the Tech Spec entered, as indicated in the caution. A Feedback Form, DC 1 Att. 10, has been submitted to the procedure group to clarify the intent of the basis information.

3. The instrument used to check sea level is a level reference (tidemeter) in one foot increments mounted on the side of the intake foundation. The tidemeter is installed with respect to intake area grade. Grade at the intake was determined during initial construction surveys to be 14.5 feet. Mean sea level was also determined during initial construction and benchmarks placed and monitored per SP CE 223, Movement Monitoring Program and documented on FSK-12179-G-029. Surveyed markings were placed on the wall where the tidemeter is hung with appropriate tolerances and uncertainties. Replacement tidemeters are hung corresponding to the surveyed marks. The intent of the tidemeter is to give the operator an estimate of tide /

ICAVP Discrepancy Report

wave level. It is not calibrated to incremental tolerances, since it is intended that the operator be ablo to make a determination of sea level from a distance.Significance level criteria do not apply as this is not a discrepant condition

Conclusion:

NU has concluded that the issue reported in Discrepancy Report. DR-MP3-0161, does not represent a discrepant condition. AOP 3569 steps 5, 6 and 7 are the procedure steps that implement the actions of Tech Spec 3.7.6 and are taken prior to level exceeding 13 feet. The apparent discrepancies in AOP 3569, SP 3665.1, and Tech Spec 3.7.6 were previously identified by NU and documented in CR M3-97-1613. The CR resolution, however, determined that there was not a discrepancy as the action for the Tech Spec would be taken in accordance with AOP 3569 and the LCO entered. Once this is done, surveillance requirements are not applicable. The instrument used to determine sea level is a level reference (tidemeter) hung at the intake. During initial plant construction, surveyed markings were placed in the location of the tidemeter to ensure it was hung properly. Significance level criteria do not apply as this is not a discrepant condition.

Reavised Response:

Disposition:

NU has concluded that the issue reported in DR-MP3-00161 has identified a NON DISCREPANT condition. Surveillance Procedure (SP) 3665.1 is entered when it is identified that Long Island Sound level is greater than eight feet above mean sea level. Upon notification of a humicane advisory, AOP 3569 is entered. Step 7 of AOP 3569 requires that the appropriate doors are closed thereby implementing the actions of Tech Spec 3.7.6. These actions are taken prior to the sea level exceeding 13 feet.

As an enhancement to SP 3665.1, procedure and form change request SP 3665.1, revision No. 5, change No. 1 (attached) has been issued which states "With sea level approaching 13 feet above mean sea level weather conditions may warrant entering T/S 3.7.6 LCO and discontinue surveillance until conditions allow".

Significance Level criteria do not apply here as this is not a discrepant condition.

Conclusion:

NU has concluded that the issue reported in DR-MP3-00161 has identified a NON DISCREPANT condition. Surveillance Procedure (SP) 3665.1 is entered when it is identified that Long Island Sound level is greater than eight feet above mean sea level. Upon notification of a humicane advisory, AOP 3569 is entered. Step 7 of AOP 3569 requires that the appropriate doors are closed thereby implementing the actions of Tech Spec 3.7.6. These actions are taken prior to the sea level exceeding 13 feet.

ICAVP Discrepancy Report

As an enhancement to SP 3665.1, procedure and form change request SP 3665.1, revision No. 5, change No. 1 (attached) has been issued which states "With sea level approaching 13 feet above mean sea level weather conditions may warrant entering T/S 3.7.6 LCO and discontinue surveillance until conditions allow".

DR No. DR-MP3-0161

Significance Level criteria do not apply here as this is not a discrepant condition.

Previously Identified by NU? () Yes	۲	No	Non	screpant Conditio	m? Yes	O No
Resolution Pending? Yes	۲	No	Rei	solution Unresolve	d? Yrs	No
Initiator: Spear, R. VT Lead: Bass, Ken VT Mgr: Schopfer, Do IRC Chmn: Singh, Anan Date: 5/26/9	on K d K 8		Acceptable	Not Acceptable	Review Needed	Date 5/26/98 5/26/98 5/27/98
SL Comments: S&L acce	pts M	VU's	response b	ased on the ad	ditional info	rmation

provided in M3-IRF-02331 and concurs that this is not a discrepant item. Revision No. 5, Change No. 1 to SP 3665.1 and associated Form referenced the Technical Specification and proveds adequate guidance for entering the LCO when the sea level approached 13 feet.

S&L determined that there is an incorrect reference to a procedure in SP 3665.1 Rev. 5. Section 7, SUMMARY OF CHANGES, states "Reference to the actions taken of water level exceeds 13 feet have been removed. These actions are dealt with in EOP 3569, Severe Weather Conditions. We believe that the reference should to be AOP not EOP 3569.

ortheast Utilities	ICAVP		(DR No. DR-	MP3-0376		
lillstone Unit 3	Discrepancy F	Repor	t				
Review Group:	Operations & Maintenance and	Testing	DR RESOLU	TION ACCEPTI	ED		
Review Element:	Corrective Action Process		P	otential Operat	wility lasue		
Discipline:	Other			O Yes			
Discrepancy Type:	Corrective Action			No No			
System/Process:	SWP						
NRC Significance level:	NA		De	te FAXed to NI):		
				Date Published	1: 10/18/97		
Discrepancy:	Inadequate documentat	ion to ve	erify commi	itment close-	out.		
Description:	In their response to NRC's Generic Letter describing Service Water System Problems Affecting Safety-Related Equipment (GL 89-13), Northeast Utilities (NU) committed to review Service Water System maintenance practices, operating and emergency procedures, and training program. The objective of the review was to confirm that procedures and program are adequate to ensure safety related equipment will function as intended. In their response to the Request for Information (RFI), which asked for documentation of the NU review, NU did not provide sufficient information to verify that the review satisfied the commitment.						
	identified three periodic statement that "Since the item is complete." No in what other surveillances related equipment or when reviewed	inspecti ne above nformati s/PM's w hat main	ons, called PM's have on was provere perform tenance pro	PM's and me been gener vided that in med on the s ocedures we	ade the rated, this dicated afety re		
	The Operations portion document the review of operating procedures w No justification was pro Control Room and Plan with LOP Test (IPTE), o System at Millstone Un	of the si f any ala vere iden vided wh t Equipm or Opera it 3 were	upplied doo rm respons tified as ha ny other pro nent Round ting Strates not include	cumentation es. Only thr wing been re ocedures suc ds; Train A & gy for Servic ed in the rev	did not ee viewed. h as B ESF e Water iew.		
	Additional information is needed to verify the close-out of the commitment to review Service Water System Maintenance practices and operating procedures as described in GL 89-13.						
	The following discrepancy was noted:						
	NU did not provide ade independent verification review.	quate do n of the	GL 89-13 S	on to comple Service Wate	te the r System		
				Review			
Initiator	١	bila	Invalid	Needed	Date		
	: Spear, R.				11/19/97		
VT Lead	: Bass, Ken				11/21/97		
VT Mo	6 - L	F-3	F -7				
VT Mgr	: Schopter, Don K	\boxtimes			12/1/97		

ICAVP Discrepancy Report

INVALID:

Date:	5/26/98					
Date: RESOLUTION:	5/26/98 Disposition: NU has concluded that this issue reported in DR-MP3-0376 has identified a NON-DISCREPANT condition. The noted condition is the lack of adequate documentation to complete the independent verification of the Generic Letter 89-13 Service Water submittal to the NRC. The initial submittal made on January 25, 1990, indicated for item V of the GL that the Operating, Emergency, and Maintenance procedures were under review and the review would be completed by the end of the next refueling outage. Training was addressed generically for all three Millstone units. A following NRC submittal on May 31, 1991, stated the activities related to item V were accomplished during the 1991 refieling outage. Subsequent to these submittals being made to the NRC, a complete formal program for compliance to Generic Letter 89-13 has been developed and instituted. The information contained in the previous NRC submittals has now been augmented considerably. NRC review and inspection of compliance of the program to the requirements of Generic Letter 89-13 is being addressed by SIL Item 36 prior to startup. Significance Level Criteria do not apply as this is not a discrepant condition. The Millstone Unit 3 GL 89-13 Service Water System Heat Exchanger Performance Monitoring Program Manual has been forwarded to Sargent & Lundy as an attachment to M3-IRF- 01949 in response to DR-MP3-0035.					
	Conclusion: NU has concluded identified a NON-D The information pro 1990, and May, 19 Letter 89-13 has be development and i January, 1998, for Item 36 addresses requirements of Gl apply as this is not	that this iss ISCREPAN eviously sul 91, for com een augmer nstitution of compliance compliance a discrepal	tue reported in I T condition. britted to the M pliance to item ted considerat f a complete for to GL 89-13 re to GL 89-13 re of the program gnificance Leve nt condition.	DR-MP3-0 NRC in Jan V of Gene bly by the rmal progra equirement n to the el Criteria o	376 has uary, eric am in s. SIL lo not	
Previously identified by NU	Yes (No	Non D	iscrepant Conditio	m? Yes	O No	
Perclution Bendit	M2 Yes @ No	Res	olution Unresolve	d? Ves	No No	
Reportion Perior				Review		
Initiator	Spear, R.	Acceptable	Not Acceptable	Needed	Date	
VT Lead	: Bass, Ken		Ц	Ц	5/26/96	
VT Mgr	Schopfer, Dor, K	N	Ц	H	5/26/08	
IRC Chinn	: Singh, Ana.nd K	N	Н	Н	0/20/90	
Date	5/26/08					
El Commente	Ni l's response did	not provide	adequate info	mation to	determine	
SL Commente	. NUS response did	nor provide	aucquate into	mationto	actonnine	

specific procedures that were reviewed as part of the GL 89-16

Northeast Utilities	ICAVP DR No. DR-MP3-0376
Millstone Unit 3	Discrepancy Report
	implementation. S&L's review of operating and maintenance procedures verified that NU's periodic review process was effective. Based on this review, S&L considers NU's response

adequate and acceptable.

Northeast Utilities	ICA	VP	1	DR No. DR-	MP3-0667
Millstone Unit 3	Discrepancy Report				
Review Group: 1	System	na na mangana na mangana kana mangana na kana mangana na kana na mangana kana na mangana kana na kana na manga	DR RESOLU	TION ACCEPT	ED
Review Element:	System Design		P	otential Operal	bility Issue
Discipline:	Mechanical Design			O Yes	
System/Process	Calculation			No	
NRC Significance level:	3		De	te FAXed to N	U:
				Date Publishe	d: 12/8/97
Discrepancy:	Calculation P(B)-1	130 Tempo	orary Ventilati	on for CCP	Pump Are
Description:	Calculation P(B)-1130 Rev. 0 calculates the heat load and ventilation requirements for temporary ventilation in the component cooling water (CCP) pumps area due to a loss of primary ventilation resulting from a fire on El 43'-6" or EL 66'-6" in the auxiliary building. During review of the calculation the following discrepancies were identified:				
	1) Calculation P(B)-900 is used as the source for the internal heat loads. The MCC and misc, electrical equipment heat loads used in P(B)-1130 are lower than those found in P(B)-900.				
	2) Calculation use temporary fan but	es a supply a does not pr	air temperatu rovide a basi:	re of 86°F in s for using th	sizing the
	3) Calculation self basis for the fan p	ects a temporessure rati	orary fan but ng selected.	does not pro	ovide a
		Valid	tounlid	Review	Date
Initiator	Start M D	Vano M			11/12/97
WT Lond:	Neri Anthony A		Н	H	11/18/97
VT Lead.	Schopler Don K		H	H	12/1/97
IRC Chmn:	Singh, Anand K	Ø	H	H	12/4/97
Date:		Rectif			
INVALID:					
Cate:	E107/08	CONTRACTOR OF CONTRACTOR		NAMES AND STREET AND ADDREED AD	
DEEOI UTION	Einst Response (M3-IRE-1302)				
RESOLUTION.	Filst Response (n				
	NU has determine Report DR-MP3-0	ed that the i 0667 does n	ssue reported ot represent	d on Discrep a discrepant	ance condition
	1. The heat loads from calculation f Calculation 95-05 diverse plant con comparable. CC temperatures tha and concludes th	of calculati P(B)-900, ar 2. Howeve ditions and N-1 to P(B)- n those con at the additi	on P(E)-1130 ad augmented r, these calcu their total her 1130 evaluat sidered in the onal heat loa) have been d by inputs fu ulations repro- at load value tes the effect e original cal- id is within do	extracted rom SGCS esent is are not t of higher culation esign limit

Calculation P(B)-900 covers normal and accident plant operating conditions with both the component cooling water system (CCP) and the charging pump system in operation.

Caiculation P(B)-1130 determines the capacity of the portable fans which are reserved for use in the event of a fire in fire area

ICAVP Discrepancy Report

DR No. DR-MP3-0667

AB-1 to cool the CCP area assuming the operation of CCP equipment only. This condition is postulated to arise due to the loss of the ventilation system by a fire at elevation 66'-6" or by a fire on the south side of the fire sprinkler curtain that separates the charging pumps area from the CCP area. This scenario is described in Appendix R Compliance Report.

2. Per FSAR Section 9.4.0, 86°F is the outdoor summer design temperature used for ventilation equipment sizing at Millstone Unit 3. According to the 1973 ASHRAE Handbook of Fundamentals, this 86°F outdoor temperature value will be exceeded for 21/2 % of the summer hours every summer on a statistical basis. Concurrent with the outdoor temperature excursions beyond 86°F, there will be indoor temperature excursions of almost the same magnitude beyond the indoor design of 110°F.

3. The fan is used in a free delivery application, therefore a pressure loss calculation is not necessary. It is installed in the frame of door A-24-2 in the Northwest corner of CCP area and the single panel Northeast door A-24-9 is opened to let the air out. The specified 1/8" i.w.g. fan static head thus provides a margin of safety.

Significance Level Criteria do not apply since this is not a discrepant condition.

Second Response (M3-IRF-01922)

NU has concluded that Item 1 of the follow-up issues on Discrepancy Report DR-MP3-0667 has identified a condition not previously discovered by NU which requires correction. CCN-02 for Calc. P(B)-1130, Rev. 00, was issued as a result of the approved corrective actions associated with CR-M3-98-1231 to revise the results to be consistent with the data in the latest revision of associated calculations P(B)-900, 3-92-103-191M3, and 92-LOE-189E3.

As requested, a copy of CCN-01 to calculation P(B)-1130 is attached. This CCN addresses the impact on the Temporary Ventilation System, which serves the Component Cooling Pump & Heat Exchanger area during loss of primary ventilation, of higher temperatures of CCP piping caused by Safety Grade Cold Shutdown operation, the revised electrical heat loads from Calc P(B)-900, and operation with a single CCP pump. Additional heat loads from piping (53,800 Btuh), utilized in CCN-01 to P(B)-1130, were taken from CCN-01 (copy attached) to Calculation P(B)-900, Rev. 1. CCN-01 to Calc P(B)-1130 is being revised/updated by CCN-02 to P(B)-1130 to utilize data from Rev. 1 of P(B)-900, including CCN-01.

1. The electrical equipment loads in P(B)-1130, Rev. 0, were originally taken from calculation P(B)-900. Rev. 0, with the discrepancies as noted in the DR. Page 6 of the current Revision of Calculation P(B)-900, (Rev. 1, copy attached), shows the Normal Condition heat load from electrical

Page 2 of 6

ICAVP Discrepancy Report

DR No. DR-MP3-0667

equipment and lighting for the Component Cooling Pump & Heat Exchanger area as 95,660 Btu/Hr. This heat load, which is based on electrical load inputs from Electrical Calculation No. 92-LOE-189E3, Rev. 0, was taken from Calculation No. 3-92-103-191M3, Rev. 1.

Calculation SGCS 95-052 is referenced in CCN-01 to Calculation P(B)-900, Rev. 1, and was used to obtain the expected rise in temperature of the CCP system.

The revisions to calculation P(B)-1130 will not change the calculation's conclusions that the temporary ventilation fans have sufficient capacity to perform their function. Therefore NU concludes that design basis/licensing basis are not affected and this issue is considered as Significance Level 4.

NU has concluded that the follow-up issues identified in Items 2 & 3 of DR-MP3-0667 do not represent a discrepant conditions.

2. Per Procedure OP 3314J, Rev. 4, Change 3, (copy attached), the outside stairwell door, A-24-1, in the northwest corner, door A-24-9, in the northeast corner, and the outer door of the HP trailer (outside of door A-24-9) are blocked open, while the inside stairwell door in the northwest corner, A-24-2, is removed and fans 3HVR-FN18A/B (as shown in Calc. P(B)-1130) are installed in the door frame, directing air to the outside. Outdoor air is thus drawn in through doorway A-24-9, via the HP trailer, in the northeast corner of the Aux. Bldg., and exhausted through doors A-24 -2 and A-24 -1, in the northwest corner. Reference Section 4.1 and 4.2 of OP 3314J for installation and operation of the fans.

3. In accordance with standard industry practice in the selection of fans for free blow applications, these units were selected from Buffalo Forge Co. Breezo Model Catalog, each meeting the following specifications: 5393 CFM @ 1/8" WG; 1140 RPM, 3/4 HP Motor, 220 VAC Single Phase. No ductwork, either upstream or downstream, is attached to these fans. The pressure losses associated with the air intake and discharge through the building are negligible. Tests for Fans 18A & B, included in Technical Evaluation No. M3-EV-98-0030, Rev. 0, indicates that the fans were functionally verified to meet their design requirements.

Attachments:

CR-M3-98-1231 with approved corrective action CCN-01 to Calculation P(B)-1130, Rev. 0 CCN-02 to Calculation P(B)-1130, Rev. 0 Calculation P(B)-900, Rev. 1 CCN-01 to Calc P(B)-900, Rev. 1 Procedure OP 3314J, Rev. 4, Change 3 Technical Evaluation M3-EV-98-0030, Rev.0

Supplemental Response (M3-IRF-2260)

The following information is provided to S&L supplementing NU's

Page 3 of 6

ICAVP Discrepancy Report

response to DR-MP3-0667 as stated in M3-IRF-01922:

During an NRC BTP 9.5-1 compliance inspection at MP3, no records could be located that confirmed flow testing of fans 3HVR-FN18A/18B. CR M3-97-3182 was initiated on 9/19/97 to provide the corrective actions. As part of the corrective actions for CR M3-97-3182, steps were added to OP 3314J, Rev. 4, to block open door A-24-9 in the Northeast corner of EL. 24'-6" the Auxiliary Building and a door of the RCA access point trailer, to provide a flow path for the fans. The faits are installed in door A-24-2 in the Northwest corner of EL. 24'-t" the Auxiliary Building. Outdoor all is thus drawn in through doorwly A-24-9, via the RCA access point trailer, in the northeast comer of the Aux. Bidg., and exhausted through doors A-24-2 and A-24-1 (outer stairwell door), in the northwest corner. The procedure change was approved 1/28/98, and the flow test proformed on 2/3/98. This supplemental information to the fc".ow-up issue identified as Item 2 of DR-MP3-0667, which was concluded not to represent a discrepant condition.

Attachments:

CR-M3-97-3182 with approved corrective action plan Procedure OP 3314J, Rev. 4

Supplemental Response (M3-IRF-2336)

NU has concluded that the issues reported in DR-MP3-00667 has identified CONFIRMED SIGNIFICANCE LEVEL 4 conditions which have been corrected. During an NRC BTP 9.5-1 compliance inspection at MP3, no records could be located that confirmed flow testing of fans 3HVR-FN18A/18B. CR M3-97-3182 was initiated on 9/19/97 to provide the corrective actions. As part of the corrective actions for CR M3-97-3182, Change No. 3 to OP 3314J, Rev. 4 was issued to add steps to block open door A-24-9 in the Northeast comer of EL. 24'-6" the Auxiliary Building and a door of the RCA access point trailer, to provide a flow path for the fans. The fans are installed in door A-24-2 in the Northwest comer of EL. 24'-6" the Auxiliary Building. Change No. 3 to OP 3314J, Rev. 4 was approved 1/28/98. Change No. 3 to OP 3314J, Rev. 4, which added steps for blocking open door A-24-9 in the Northeast corner of EL. 24'-6" of the Auxiliary Building and a door of the RCA access point trailer, to ensure a flow path for fans 3HVR-FN18A/18B, was initiated and approved after 5/27/98, the date of completion of discovery of the CMP process. This is supplemental information to Item 2 of the followup issues of DR-MP3-0667. See M3-IRF-1922 and M3-IRF-2260 for additional information.

NU has concluded that although opening the auxiliary building and RCA access point trailer doors to allow supply air to enter the building was not previously proceduralized (Ref. procedure OP 3314J), it is considered that based on operator experience, the fact that the Technical Support Center (TSC) will be in operation and manned with experienced engineers and operators, and the time required to install the temporary ventilation fans, a reasonable assumption would be that the

Northeast Utilities	IC	CAVP	DF	R No. DR-M	AP3-0667
Millstone Unit 3	Discrep	ancy Repo	ort		
	doors would be in the absence considers this is	opened to allo of specific pro ssue to be Sig	ow cooling air fl cedural guidan nificance Level	ow to the a ce. NU, the 4.	rea even refore,
Prevalsly Identified by NU?	O Yes 🔘	No Non D	iscrepant Condition	on? Yes	No No
Resolution Pending	? Yes 🔘	No Re	solution Unresolve	ed? Yes	No
initiator: VT Lead: VT Mgr: IRC Chmn: Date:	Stout, M. D. Neri, Anthony A Schopfer, Don K Singh, Anand K 5/27/98	Acceptable	Not Acceptable	Review Needed	Date 5/27/98 5/27/98 5/27/98 5/27/98
	NU is requeste is required to c	d to provide a omplete the re	copy of CCN-1 view of NU's re	to P(B)-11	30 which
	1) Electrical He NU's response electrical equip calculations P(eat Loads does not adeo oment, cable, a B)-1130 and P	uately address and lighting hea (B)-900.	the different t gains use	nces in the d in
	The electrical elighting at 25,6 14,450 Btu/hr a Btu/hr.	equipment load 00 Btu/hr, MC and cables at 4	ds in calculation C and misc. ele 4,200 Btu/hr for	P(B)-1130 ectrical equi a total of 4	pment at 4,250
	The electrical e control centers equipment at 8 lighting at 25,6	equipment load at 13,200 Btu 3,450 Btu/hr, ca 500 Btu/hr for a	ds in calculation /hr, miscellaned able loads at 4, a total of 51,450	n P(B)-900 bus electric 200 Btu/hr,) Btu/hr.	are motor al and
	Inaddition calc normal condition shown on page operation is 95 189E3.	ulation 3-92-10 on electrical lo e 15 of calcula 5,660 Btu/hr an	03-191M3 has a ads. The electrition 3-92-103-1 id was based or	a different v ical equipm 91M3 for n n calculation	value for eent loads ormal n 92-LOE-
	NU's response 1130 were aug Describe what why it was not	indicates that mented by inp information fr documented i	the heat loads outs from SGCS om 95-052 was n calculation P(of calculatio Calculatio used and a (B)-1130.	on P(B)- n 95-052. address
	2) Supply Air 1 Agree with NU temperature is	Temperature I's response th 86°F.	at the design su	ummer outo	loor air
	Per NU's response northwest stain 24'-6" in the au door A-24-9. F of the air draw temperature.	onse the temp well at door A uxiliary buildin Provide the bas on from the sta	orary faths draw -24-2 and disch g. The air is rel sis for assuming irwell is the san	air from th arges to the ieved to out that the te ne as the o	e e elevation tdoors thru emperature utdoor air

ICAVP Discrepancy Report

DR No. DR-MP3-0667

Note that System Operating Procedure OP 3314J, Rev. 4 'Auxiliary Building Emergency Ventilation and Exhaust' describes using the temporary fans at door A-24-2 as exhaust fans but does not address what door(s) are opened to allow outside air into the area for cooling.

3) Fan Pressure

While the fan is not connected to ductwork, there are still pressure losses associated with the air intake into the auxiliary building and outlet from the auxiliary building. These losses should be addressed in the calculation.

Comments on Second and Supplemental Responses

Agree with NU's response for items 1 and 3.

Agree that Procedure OP 3314J Rev. 4, Change No. 3, dated 1/28/98 addresses the outdoor air intake path of item 2. As the need to change the procedure was identified after the CMP completion date this is considered to be a Level 3 discrepancy. FPER Soction 8.5 states that portable ventilation is provided to cool the CCP pumps should all auxiliary building ventilation be lost. Failure to open a door to provide an outside air intake path for the temporary fans does not agree with the FPER and would have resulted in the area temperature being higher than that determined in calculation P(B)-1130. Disagree with NU's response that it is reasonable to rely on operator action not contained in the procedure to the open doors needed to provide an outside air intake path at the time the temporary fans are installed.

The significance level of this DR is unresolved.

Additional Comments

As directed by the NRC, the DR is being reissued as a confirmed Level 3 discrepancy.
Northeast Utilities	ICA	VP	[DR No. DR-	MP3-0676
Millstone Unit 3	Discrepan	y Repo	rt		
Review Group:	Configuration	CARACTER DATE: A CONTRACT	DR RESOLU	TION ACCEPTE	ED
Review Element:	System Installation		Pri ential Operability Is		
Discipline:	Other			() Yes	,
Discrepancy Type:	Installation Implementatio	n		No No	
System/Process:	HVX				
NRC Significance level:	4		Da	te FAXed to NU):
				Date Published	1: 12/7/97
Discrepancy:	Walkdown Discrep	ancies of H	VX and SLCI	RS	
Description:	The following discr of the ducting and SLCRS:	repancy iten mechanical	ns were foun equipment c	d during the of the HVX an	walkdown nd
	1. Flow elements 3 labels.	HVR*FE88	A and 3HVR	*FE88B have	e no NU
	2. Instrument line 3 (first support from drawing EK-51212	3HVR-PDIS the filter 3H 3 Rev 2.	157A has an VR*FLT3A) 1	additional si that is not sh	upport own on
	3. Support DSA11 additional lateral p legs of the support unincorporated DC	39 shown or ipe restraint that is not s Ns.	n drawing BZ attached to shown on the	-545-48 Rev one of the ve drawing or	/3 has an ertical its
	 Damper 3HVR*DMPB5B has no NU label. Dampers 3HVR*DMPB6A and 3HVR*DMPF23 have no NU labels. 				
	6. Dampers 3HVR NU labels.	*DMPB5A a	and 3HVR*DI	MPF22 have	no visible
	7. Part of duct nex insulated (2 hr fire	t to damper rated) as ca	s 3GWS*AC alled for on d	D78A/B is n Irawing EB-4	ot 5L Rev13
	8. Dampers 3HVR 3HVR*MOD45B1	*DMP5, 3H have no NU	VR*MOD45E labels visibl	32 and le.	
	9. Flow element 3	HVR*FE52E	3 iabel reads	*FE88A.	
	10. Damper 3HVR	MOD50C2	has no mfg	label visible	в.
		Valid	Invalid	Needed	Date
Initiator:	Read, J. W.				11/14/97
VTLead	Neri, Anthony A	M	П		11/19/97
VT Mor	Schopfer, Don K	M	П	Ē	12/1/97
IRC Chmp:	Singh, Anand K	X	Ē		12/3/97
Bute			hard at a rear	and a second	nan de Alan de anter en de la Sera de La Sera
Date					
INVALID					
	5/27/08	C BLOCK DAMAGE AND A		ana mananana sa mangana manda yang kanan	AND A FORT OF STREET, AND SHOE
DECO UTION	Eiret Dependence (h)	12 IDE 0247	(A)		
REGOLUTION.	THE TREADURE (N	WINN VEIL			

Northeast	t Util	ities
Millstone	Unit	3

NU has concluded that the issues reported in DR-MP3-0676 have identified CONFIRMED SIGNIFICANCE LEVEL 4 conditions which require correction. Items 1,4,5,6,7,8,9 and 10 meet the criteria specified in NRC letter B16901 and 17010. They have been screened per attachment 11 of U3 PI-20 criteria and found to have no operability or reportability concerns and meet section 1.3.2.e of U3 PI 20 deferral criteria.

NU has concluded that the issues reported in items 1, 7, 8, 9 and 10 of DR-MP3-0676, have identified conditions which require correction. A discussion of each issue follows:

Item 1 is valid, 3HVR*FE88A and 3HVR*FE88B do not have NU labels installed.

Item 7 is valid, drawing EB-45L does indicate the section of duct in question should be insulated with 2 hr. fire rated insulation. However, the plan drawing EB-45H does not indicate the section to be insulated. The P&ID drawing EM-148E also does not indicate the section to be insulated. NU acknowledges that the duct should be insulated with at least a 1 hr. fire wrap. (DCN DM3-00-0855-97 reduces the required insulation on this section of duct to 1 hr. fire rated) but that it remains operable without it because the damper supports are fire protected and the duct itself is capable of withstanding a 1 hcur fire. For information, an old E&DCR F-B-39542, for both EB-45H and 45L, shows this small section of 16" x 12" duct insulated.

Item 8 is valid, damper 3HVR*DMP5 has no label, however dampers 3HVR*MOD45BL & 3HVR*MOD45B2 do have labels installed.

Item 9 is valid, 3HVR*FE52B has a manufacturer's tag with the incorrect identification (3HVR*FE88A) and should be corrected.

Item 10 is valid, however damper 3HVR*MOD50C2 has no manufacturer's tag, but does have an NU label.

NU has concluded that issues 4 and 5 reported in DR-MP3-0876 have identified a PREVIOUSLY IDENTIFIED condition.

Item 4 is valid, however damper 3HVR*DMPB5B has no label. This condition was pre-discovered by PI 24 walkdowns and identified on UIR 2582 (attached) section E.4.

Item 5 is valid, however damper 3HVR*DMPB6A has no label. This condition was pre-discovered by PI 24 walkdowns and identified on UIR 2582 section E.5. Damper 3HVR*DMPF23 has no label and was not prediscovered.

Item 6 is valid, however damper 3HVR*DMPB5A has no label. This condition was pre-discovered by PI 24 walkdowns and identified on UIR 2582 section E.3. Damper 3HVR*DMPR22 has no label and was not prediscovered.

ICAVP Discrepancy Report

DR No. DR-MP3-0676

operated by Plant Operators, so the missing labels will not impact plant operation. The missing duct insulation, item 7, does not affect operability because the duct has a one hour fire rating itself. Therefore the installation of the insulation may be deferred until post startup.

For items 1,4,5,6,7,8, 9, and 10 the missing labels and insulation will be installed post startup. CR M3-98-2312 was closed to BIN CR M3-98-0165. The corrective actions for CR M3-98-0165 will install these labels and the duct insulation.

NU has concluded that the issues reported in items 2 and 3 of Discrepancy Report, DR-MP3-0676, have identified NON-DISCREPANT conditions. A discussion of each issue follows.

Item 2 is not valid, the instrument line for 3HVR-PDIS157A has a total of 6 supports from the filter 3HVR*FLT3A to the per.etration in the floor. This is in agreement with EK-512123 rev 2. This is not considered a discrepancy.

Item 3 is not valid, this is an additional pipe support attached to support DSA1139. This support is detailed on E&DCR N-CS-03528 pages 17 & 81. This E&DCR is posted against the DSA support drawing no. 25212-22642/1139. This is not considered a discrepancy.

Attachments: CR M3-98-2312 UIR 2582

Supplemental Response (M3-IRF-02357)

NU has concluded that this issue reported in DR-MP3-0676 has identified a CONFIRMED SIGNIFICANCE LEVEL 4 condition which requires correction. Pursuant to discussions with S&L for clarification of the issue, NU submits the following additional information:

The unwrapped duct identified in DR-MP3-0676 represents a condition that is inconsistent with the configuration of the SCLRS ductwork as depicted on drawing EB-45L. This inconsistency does NOT represent a departure from the MP3 LB / DB since the licensing commitment made in the FPER page B-21, Position C5.a.(4), is strictly adhered to as described in the NU Response C.5.a. (4) [See Attachment A for a graphical representation of the duct in question and its relation to the required configuration as described in Position C.5.a.(4)]. The unwrapped duct in guestion is outside of the LB / DB commitment space. Additionally, as stated in the reportability determination of condition report M3-98-1651 (See Attached). the unwrapped duct poses no operability or safety concern. Action request 98006344 will track all work activities necessary to ensure consistency between the FPER, the SLCRS duct work, the drawings, and the plants procedures. AWO M3-98-06394 will control the work activities necessary to install the fire wrap on the unwrapped duct.

Northeast Utilities Millstone Unit 3	ICA Discrepan	VP Icy Repo	ort	No. DR-N	1P3-0676
Previously Identified by NU7 Resolution Pendir	NU considers DR-MP3-0676 to be a valid level 4 discrepancy. These corrective actions will be completed after MP3 startup. Attachments: 1. Attachment A: Graphical illustration of discrepant condition 2. Condition Report M3-98-1651				
	Yes No 9? Yes No	Non D Rei	iscrepant Conditionsolution Unresolve	n?) Yes	NoNo
Initistor: VT Lead: VT Mgr: IRC Chmn:	Stout, M. D. Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date 5/27/98 5/27/98 5/27/98
Date: SL Comments:	5/27/98 Agree with NU tha Agree with NU tha 3HVR*DMPB5A a by NU	nt items #2 a nt missing la nd #HVR*D	and #3 are non- bels for 3HVR* MPB6A were p	discrepant. DMPB5B, reviously id	lentified

Agree with NU that items #1, 5, 6, 7, 8, 9, and 10 are level 4 discrepancies.

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ICAVP Discrepancy Report

DR No. DR-MP3-0854

Review Group: S	ystem		DR RESOLU	TION ACCEPTE	D
Review Element: S	ystem Design		p	otential Operab	ility Issue
Discipline: 1	& C Design			O Yes	
Discrepancy Type: L	icensing Document			No No	
System/Process: D	GX				
NRC Significance level: 4			De	te FAXed to NU	1:
				Date Published	1/18/98
Discrepancy:	FPER Figure 7-1.4	contains in	correct instr	ument numbe	ers
Description:	FPER Figure 7-1.4 level indicating sw function of these s Pumps 3EGF*P1A	, Amendme itches *LIS2 witches is to ,B,C,D, resp	ent 14 dated 6A, B and L o start/stop th pectively.	July 1985 de IS27A, B. Th re Fuel Oil Tr	picts ie ransfer
	These numbered s Emergency Gener an associated loop Diagram LSK-8-9/ depicts the control components do no were procured at of vendor drawings fi specification. A re work orders (AWC information in the required for the sw returned to the ve Switches 3EGF*L1 under Spec 377 w switches. These 15, 1985. The fur old ones. These Their correspondi associated Loop I Rev. 4; 3EGF-047 new switches do r	witches do ator Fuel Oi diagram, n A, Rev. 9, Er logic for the tappear in lone time undo or these swite view of PM bs) for these history files, vitches were ndor. S40A, B and ith subseque hew switches are not or bis soft these history files, vitches were ndor. S40A, B and ith subseque hew switches are not appear in A, Rev. 4; a not appear in	not appear of I System. T or do they a mergency G e above pum PMMS or PI der Spec. 24 tches in GRi MS history d switches. E the wrong r received an d 3EGF*LS4 ent installations were place e new switch depicted on agram is LSM e 3EGF-040, and 3EGF-040, an	n P&ID EM-1 hey also do r ppear in the L enerator Fue ps. These 24.210-377. TS under the id not identifi- ased on othe nodel number d the switches 1A,B were put on of these no d in service of es is the sam P&ID EM-11 (-8-9A, Rev.) A, Rev.3; 3E0 (1B, Rev.5.)	and the second s
	FPER Figure 7.1-	4 should be	revised to in	dicated these	e new
	strictin northboro.			Review	
		Valid	Invalid	Needed	Date
Initiator:	Launi, C. M.				1/6/98
VT Lead:	Neri, Anthony A				1/6/98
VT Mgr:	Schopfer, Don K	\boxtimes			1/12/98
IRC Chmn:	Singh, Anand K				1/14/98
Date:					
INVALID:					
	E/20/08	IN CARL IN MUCH - STORE #12 APRIL SHOUL	NEELINGTONE JELINGS AND	A MARKAN AND THE REPORT OF THE REPORT OF THE	ALL REPORT OF STREET, MARKAGE

NU has concluded that this issue reported in Discrepancy Report DR-MP3-0854 has identified a CONFIRMED SIGNIFICANCE

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Northeast Utilities	ICA	VP	DR	No. DR-M	P3-0854
Milistone Unit 3	Discrepar	icy kept		NAMES AND ADDRESS OF ADDRESS	-
	EVEL 4 which requires correction. This discrepancy me riteria specified in NRC letter B16901 and 17010. It has creened per attachment 11 of U3 PI-20 criteria and four lave no operability or reportability concerns and meets s .3.2.e of U3 PI 20 deferral criteria. CR M3-98-2314 has written to revise FPER Figure 7.1-4 to indicate the new s iumbers. The P&ID EM-117A-10 and the Logic Diagram A are correct and show level indicating switches3EGF*1 3 and 3EGF*LS41A,B not *LIS26A, B and LIS27A. The BEGF*LS40A, B and 3EGF*LS41A,B are in PMMS and f well as being on the Safe Shutdown Equipment List (SSI correctly.CR M3-98-2314 was closed to Bin CR M3-98-0 The corrective Actions of CR M3-98-0167 will correct the Figure post startup. There is no affect on License of Des Basis. Conclusion: NU has concluded that this issue reported in Discrepancy me criteria specified in NRC letter B16901 and 17010. It has screened per attachment 11 of U3 PI-20 criteria and four have no operability or reportability concerns and meets s 1.3.2.e of U3 PI 20 deferral criteria. CR M3-98-2314 has written to revise FPER Figure 7.1-4 to indicate the new s numbers.CR M3-98-2314 was closed to Bin CR M3-98-2314 has written to revise FPER Figure 7.1-4 to indicate the new s numbers.CR M3-98-2314 was closed to Bin CR M3-98-2314 has written to revise FPER Figure 7.1-4 to indicate the new s numbers.CR M3-98-2314 was closed to Bin CR M3-98-2314 has written to revise FPER Figure 7.1-4 to indicate the new s numbers.CR M3-98-2314 was closed to Bin CR M3-98-0314 has written to revise FPER Figure 7.1-4 to indicate the new s numbers.CR M3-98-2314 was closed to Bin CR M3-98-0314 has written to revise FPER Figure 7.1-4 to indicate the new s numbers.CR M3-98-2314 was closed to Bin CR M3-98-0314 has written to revise FPER Figure 7.1-4 to indicate the new s numbers.CR M3-98-2314 was closed to Bin CR M3-98-0314 has written to revise FPER Figure 7.1-4 to indicate the new s numbers.CR M3-98-2314 was closed to Bin CR M3-98-03-067 he corrective Actions of CR M3-98-0167 will		iee is the is been und to section as been switch n LSK-8- *LS40A, e switches PDDS as SEL) 0167. he FPER esign icy Report CANCE neets the as been und to is section as been y switch		
	Basis.	p. There is	no anosi on Lio		org.r
Previously Identified by NU?	🔿 Yes 🔘 No	Non D	iscrepant Conditio	m?() Yes	No
Resolution Pendin	g? Yes 🖲 No	Re	solution Unresolve	d? Yes	No
		Acceptable	Not Acceptable	Review	Dute
Initiator:	Tenwinkel, J. L.				5/26/98
VI Lead:	Nen, Anthony A				5/26/98
VT Mgr:	Schopter, Don K			LI	5/26/98
IRC Chmn:	Singh, Anand K				
Date:	5/26/98				
SL Comments:	No comments.				

ortheast Utilities	ICA	VP		DR No. DR-	MP3-0944
lillstone Unit 3	Discrepan	cy Repo	ort		
Review Group:	Operations & Maintenan	ce and Testing	DR RESOLU	UTION ACCEPT	ED
Review Element:	Corrective Action Proces	6		Potential Operal	hility issue
Discipline:	Operations			Ves.	unity toooc
Discrepancy Type:	Corrective Action			No No	
System/Process:	DGX			-	
NRC Significance level:	4		D	ate FAXed to N	U:
				Date Publishe	d: 1/25/98
Discrepancy:	Procedure revision in LER 89-015-00	ns do not pr	event recurri	ance of even	t reported
Description:	A review of the review of the review of the review of the review as unable to determine operating error desimilar circumstant that the "A" Emergy Train 4160/480 VA prior to removing the service. This is a	view of the requirement described in REQ-MP3-DGX-028 unable to determine how the corrective actions prevent the ating error described in LER 89-015-00 from recurring un- ar circumstances. LER 89-015-00 reports a failure to asset the "A" Emergency Diesel Generator and its associated " a 4160/480 VAC Emergency Busses were fully operational to removing the "B" Emergency Diesel Generator from ice. This is a discrepancy. Form 3672.1-2 is performed daily but only confirms that to senergized. There is no provision for the operator to re- bus load or to compare it against a limiting value based of power source. Therefore, OP Form 3672.1-2 would not ent recurrence.			
	OP Form 3672.1-2 bus is energized. the bus load or to the power source. prevent recurrence				
	OP 3344A describ power source to the is nothing that information and the electrical line-up to bus. Therefore, the information availad operability issues Therefore, OP 334	the nece ne 480v load orms subsect hat limits the ne operator ble to make of the opposition 44A would n	ssary steps d centers with uent shifts the load carryindoes not have the correct site emerger not prevent re	to manipulate h precautions hat there is a ng capabilitie ve the necess decision rega ncy diesel ge ecurrence.	e the s but there in inusual es of the sary arding nerator.
	This procedure als service if bus 32S However, the port normal supply doe operational condit	so requires i is being su ion of OP 3 as not menti ion.	removing the pplied throug 344A that re on returning	e A "CAR" Fa gh a cross-tie turns bus 323 the A "CAR"	n from 5 5 to its 7 Fan to an
	Commitment Rec to delineate the E review was unable new procedure was procedure was rec	ord 17554 c lectrical Pla e to determi is issued. In vised.	ommits to "In nt Line-up co ne from the instead, it app	ssue a new p onditions" Validation Te pears that an	The The ext what existing
		Malia	Investid	Review	Data
Initiator	Tambo Tom	101	IT I	Interested	1/19/98
Initiator:	Base Kon		Н	H	1/10/08
VT Lead:	Schooler Dan K		Н	H	1/20/98
IBC Character	Singh Anand K		Н		1/21/98
into onimit:	Singht, Andrew K				112 1100
Date:					

ICAVP Discrepancy Report

Date: 5/26/98

RESOLUTION: Disposition:

NU has concluded that the issue reported in DR-MP3-00944 has identified a NON-DISCREPANT condition. Section 4.4, "Cross-Tying 480 Volt Load Centers", and Section 4.5, "Restoring Cross-Tied 480 Volt Load Centers" of Procedure OP 3344A Rev. 11, are sufficient to prevent the operating error described in LER 89-015-00 from recurring under similar circumstances. These steps contain the appropriate instructions and cautions to address the root and contributing causes of the event, as identified in the LER. In addition, logs, shift turnovers, and red TAGs provide additional mechanisms to prevent said operating error. Operations uses Section 4.4 to cross tie the 480 volt load centers. The first step, 4.4.1 requires the operator to refer to the Technical Specifications (T/S) and determine the applicable LCO actions. Step 4.4.1 identifies the applicable T/S including 3.8.3.2. This addresses the root cause identified in the LER, by providing procedural guidance to ensure that all T/S requirements are being met. Applicable T/S LCOs and abnormal electrical alignments are logged by the operating shift and carried forward as part of the Shift Turnover process (OP 3260 Conduct of Operations). The shift log and turnover report would be reviewed should an EDG subsequently be determined to be Inoperable. This review is specifically performed to determine if additional T/S LCOs now apply because of the EDG Inoperability. OPS Form 3672.1-2 is used to perform T/S Surveillances, and is not intended to address LER 89-015-00 Restoration of the cross tied 480 volt load centers, by subsequent shifts, will be by procedure OP 3344A Section 4.5. Steps 4.5.1 through 4.5.9 restore the load center to the normal alignment. Step 4.5.10 allows loads removed from service in section 4.4 to be restored, for example the A "CAR" fan. In addition, the procedure for cross tying the 480 volt load centers requires the use of TAGs in order to prevent operation of the component while the bus is cross tied. These TAGs document why the breakers are racked out, and can be considered to be another mechanism to inform operators of an unusual electrical line-up that limits the load carrying capabilities of a bus. Significance level criteria do not apply here as this is a nondiscrepant condition.

Conclusion:

NU has concluded that the issue reported in DR-MP3-00944 has identified a NON-DISCREPANT condition.

Section 4.4, "Cross-Tying 480 Volt Load Centers", and Section 4.5, "Restoring Cross-Tied 480 Volt Load Centers" of Procedure OP 3344A Rev. 11, are sufficient to prevent the operating error described in LER 89-015-00 from recurring under similar circumstances. These steps contain the appropriate instructions and cautions to address the root and contributing causes of the event, as identified in the LER. In addition, logs, shift turnovers, and red TAGs provide additional mechanisms to prevent said operating error.

Significance level criteria do not apply here as this is a nondiscrepant condition.

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Northeast Utilities Millstone Unit 3	IC/ Discrepa	AVP ncy Repo	ort	R No. DR-	MP3-0944
Previously Identified by NU?	🕖 Yes 💌 No	Non D	Discrepant Condition	m? Yes	• No
Resolution Pendin	g? Yes 🖲 No	Re	solution Unresolve	d? Yes	No No
Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	Spear, R. Bass, Ken Schopfer, Don K Singh, Anand K 5/26/98	Acceptable	Not Acceptable	Review Needed	Date 5/26/98 5/26/98 5/27/98
SL Comments:	S&L concurs that prevent a reoccu 89-015-00. OP 3 instructions and c causes of the eve revision 11 in NU effective date of discovery date. discrepancy.	the identifie mence of the 344A was n cautions to a ent. This rev "s response November 1 Therefore, S	ed correctives and e operating error evised to contain ddress the root ision to OP 334 dated May 2, 19 3 1997 which is &L considers th	re sufficien or describe in the appr and contri 4A was ide 998 and has after the l is to be a l	at to d in LER ropriate bution entified as as an ICAVP level 4

lortheast Utilities	ICA	VP	C	DR NO. DR-	MP3-0984
fillstone Unit 3	Discrepan	cy Repo	ort		
Review Group: 1	System		DR RESOLUT	TION ACCEPTE	D
Review Element:	Modification Design		Pr	stential Operab	iiity Issue
Discipline:	Mechanical Design			() Yes	,
Discrepancy Type:	Calculation			No No	
System/Process:	DGX			C	
NRC Significance level: I	NA		Da	te FAXed to NU	l:
				Date Published	: 1/25/98
Discrepancy:	Seismic test repor modifications are	orts for equipment installed by plant e not available for review.			
Description:	 Description: The seismic test reports listed below are identified associated PDCRs as the basis for the seismic q the equipment installed by plant modifications. The were requested on Request For Information M3-File AVP Response Form M3-IRF-01312 provided documentation (purchase orders, certificates of content of the subject equipment; however, the seismic test is were not available. Therefore, the seismic test is be reviewed for compliance to the seismic require applications identified in the PDCRs. Modification No.: PDCR# MP3-86-334 Equipment: GE Model 12SFF31A1A Related Location: Panels 3EGS*PNLA/B Test Report No.: PDCR# MP3-87-025 Equipment: GE Model No. 12PVD99AB00 Location: AKV Switchgear Test Report No.: NTS Report No. 22650-87N 		 not available for review. reports listed below are identified in the Rs as the basis for the seismic qualification stalled by plant modifications. These reports is the plant modification M3-RFI-00827. Form M3-IRF-01312 provided the purchas purchase orders, certificates of compliance quipment; however, the seismic test reports can compliance to the seismic requirements of the the PDCRs. PDCR# MP3-86-334 GE Report No. MIL 82-12 PDCR# MP3-87-025 GE Model No. 12PVD99AB001A Relays 4KV Switchgear NTS Report No. 22650-87N		
	Modification No.: Equipment: Location: Test Report No.:	PDCR# MP Westingho Panels 3E0 NTS Report	P3-94-006 buse V46D47 GS*PNLA/B 1 No. 60318-	T45C Transf 94N	ormer
	. our report ron			Review	
		Valid	Invalid	Needed	Date
Initiator:	Johnson, Jay				1/19/98
VT Lead:	Neri, Anthony A				1/19/98
VT Mor:	Schopfer, Don K				1/20/98
IRC Chmn:	Singh, Anand K				1/22/98
Date:					
INVALID					
	Construction of the Construction of the State of the Stat	NAME AND ADDRESS ADDRES	ENG-MERICIPAL ANT HARD PARTY AND A MARK AND		
Date	5/27/98				
RESOLUTION	NU has conclude DR-MP3-0984 do previously provid Compliance toge (Attachment 2 of justification for th references GE R included in the m	d that the iss ees not repre- ed Purchase ther with the PDCR) e use of the eport No. MI odification p	sue reported sent a discre orders and contains a d which provide replacement L 82-012, bu package, nor	in Discrepan pant condition Certificates etailed seism es engineerin relays. The t the report in is it required	cy Report on. The of nic review review tself is no to be.

DR No. DR-MP3-0984

Discrepancy Report

ICAVP

previously provided to S&L document that the replacement relays meet the same criteria as the original components. Therefore, there is no discrepant condition.

PDCR# MP3-87-025 pertains to Resistance Temperature Detectors, not the referenced GE relays. Therefore there is no discrepant condition identified.

PDCR# MP3-94-006 which replaced transformers in 3EGS*PNLA/B contains a detailed seismic qualification review (Nc. SQR3-94-0014) which provides engineering justification for the use of the replacement transformers. The review references NTS Report No. 60318-94N, Rev. 0 (P.O. 952131) but the report itself is not included in the modification package, nor is it required to be. The Purchase Orders and Certificates of Compliance previously provided to S&L document that the replacement transformers meet the same criteria as the original components. Therefore, there is no discrepant condition.

Significance Level criteria do not apply here as this is not a discrepant condition.

Previously Identified by NU? Yes () No	Non D	iscrepant Conditio	m? Yes	O No
Resolution Pending? Yes	Rei	solution Unresolve	d? Yes	 No
Initiator: Johnson, Jay	Acceptable	Not Acceptable	Review Needed	Date
VT Lead: Neri, Anthony A			Н	5/27/98
VT Mgr: Schopfer, Don K IRC Chmn: Singh, Anand K	IZ	ğ		5/27/98
Date: 5/27/98				

SL Commente: S&L COMMENTS ON FIRST NU RESPONSE:

PDCRs MP3-86-334 and MP3-94-006:

Although it may not be required that the seismic report be included in the modification package, it is not possible for S&L to verify that the seismic review contained in the PDCR is correct without it. If the engineer used the report in his seismic review of the PDCR then it should be made available to S&L for verification.

PDCR MP3-87-025:

Rereview of the PDCR provided to S&L for verification indicates that it does pertain to GE relays. If other information is available showing that the subject change affects RTDs instead then this should be made available to S&L for verification.

S&L COMMENTS ON SUBSEQUENT NU RESPONSE VIA TELECON:

Subsequent to further discussions with NU via telecon, NU confirmed that PDCR MP3-87-025 does pertain to the subject GE PVD relays. In addition, NU provided adequate documentation on all of the subject test reports identified in this discrepancy;

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Northeas	t Util	ities
Millstone	Unit	3

DR No. DR-MP3-0984

therefore, this is a non-discrepant condition.

Northeast Utilities Millstone Unit 3	ICA Discrepar	VP cy Repo	ort	DR No. DR-	MP3-1009
Baview Group	Programmatic	10000000000000000000000000000000000000	DR RESOLU	JTION ACCEPT	ED
Review Element:	Corrective Action Proces	6	F	otential Opera	bility Issue
Discipline:	I & C Design	ventation		O Yes	
System/Process:	SWP	REFILENCE		(No	
NRC Significance level:	4		D	Date FAXed to NU:	
				Date Publishe	d: 2/7/98
Discrepancy:	Inadequate Impler	nentation D	ocumentatio	n	
Description:	Unresolved Item F that an "engineerin (MEPL) evaluation Non-Conformance "engineering revie included in the UII	Report (UIR) ng review" (MP3-CD-1 Report (NC w" (MEPL e R 432 closur	432 Closure Material Equ 071) was pe CR) 395-065 evaluation M re package.	e Request do ipment Parts formed to d however, th P3-CD-1071	ocuments s List isposition is) was not
		Valid	Invalid	Review	Date
Initiator	Dombrowski Jim				1/30/98
VT Lead:	Rvan, Thomas J	×	H		1/30/98
VT Mgr:	Schopfer, Don K	×	ō		2/2/98
IRC Chmn:	Singh, Anand K				2/3/98
Date:					
INVALID:					
Date:	5/27/98	and successively grown with the s	CONTRACTOR OF CONTRACTOR OF CONTRACTOR	Reaction of Society and a second characteristic	and the sector cardination of the sector
RESOLUTION:					
	NU's First Respor	ise			
	NU has concluded identified a condit requires correctio in NRC letter B16 20 criteria and for concerns and me has been written to RP-4.	d that Discre ion not prev n. This discr 901 and 170 und to have ets the Unit to develop a	epancy Repo riously disco repancy mee 010. It has b no operabilit 3 deferral cr and track res	ort, DR-MP3- vered by NU ets the criteria een screened ty or reportat iteria. CR Mi olution of this	1009, has which a specified d per U3 P bility 3-98-1143 s item per
	NU's Second Res	ponse			
	Background: S & L's Considers Discrepancy Rep the discrepancy a This ACR was ide specific reason a verification of con this DR resolution	the NU res ort DR-MP3 is follows: entified as a cceptably di mpletion will in is unaccep	sponse stated -1009 unacc "Start-up" d spositions th I be delayed otable.	d in M2-IRF- æptable. S & ocument. Un is ACR as to till after plan	01914 to & L restate niess a why it start-up,
	Disposition: NU has conclude	d that the is	sue reported	in DR-MP3	01009 has

ICAVP Discrepancy Report

DR No. DR-MP3-1009

has determined that the closure package is adequate. NCR 3-95-0065 identified and resolved the condition tracked by UIR 432, and is contained in the UIR 432 Closure Package. MEPL MP3-CD-1071 is referenced by NCR 3-95-0065, but is not considered part of the NCR. MEPL MP3-CD-1071 is being provided. Significance level criteria do not apply here as this is a nondiscrepant condition.

Conclusion:

NU has concluded that the issue reported in DR-MP3-01009 has identified a NON-DISCREPANT condition.Further investigation has determined that the closure package is adequate. NCR 3-95-0065 identified and resolved the condition tracked by UIR 432, and is contained in the UIR 432 Closure Package. McPL MP3-CD-1071 is referenced by NCR 3-95-0065, but is not considered part of the NCR. MEPL MP3-CD-1071 is being provided. Significance level criteria do not apply here as this is a non-discrepant condition.

Attachments: ONCR 3-95-0065 MEPL MP3-CD-1071

NU's Supplemental Response:

Disposition:

NU has concluded that this issue reported in DR-MP3-01009 has identified a CONFIRMED SIGNIFICANCE LEVEL 4 condition which requires correction. This discrepancy meets the criteria specified in NRC letter B16901 and 17010. It has been screened per U3 PI-20 criteria and found to have no operability or reportability concerns and meets the Unit 3 deferral criteria. This item meets the deferral criteria of section 1.3.2.e of U3 PI-20. CR M3-98-1143 has been written to correct the original item post startup. CR M3-98-1143 has been written to identify that the disposition of NCR 395-065 does not clearly state the bases for the decision, and to correct this post startup.

MEPL evaluation MP3-CD-1071 identified several instruments installed on the Service Water system that were designated as nonQA but were connected to the system through common tubing with safety related instruments. The concern was that a postulated failure of the nonQA instrument to maintain its system pressure boundary could render the safety related instrument as unable to perform their safety function. The original NCR disposition indicated that the instruments would be upgraded to QA, UIR 432 documented this action as startup related, however a subsequent ADMIN Disposition declared the condition as nondiscrepant based upon engineering review but did not provide any basis for that disposition. UIR 432 was closed based upon the ADMIN disposition on the NCR.

The installation program implemented at MP3 established two installation categories. Group A installations were those instruments connected to safety related process piping or

ICAVP Discrepancy Report

DR No. DR-MP3-1009

equipment regardless of whether or not the instrument performed a safety related function. Group B installations connect nonsafety related instrumentation to non-safety related processes. Group A installations are designated as safety class 2, QA, seismic, and meet the design and material requirements of ASME III, subsection NC. The original procurement specifications for instruments such as those identified in the MEPL purchased instruments as either QA Cat 1 or QA Cat 2 under the Stone & Webster QA program. The seismic acceptability or qualification of the instruments was documented via a qualification test report through the procurement specification or the instruments were evaluated for seismic pressure boundary integrity through calculation by the engineering department. The seismic acceptability of the instruments is not based upon the QA, or nonQA, MEPL designation established for the purposes of future procurement and replacement of the instruments but is instead based upon how the instruments will be installed in the plant, i.e., as Group A. Therefore, the ADMIN Disposition of NCR 395-065 is correct and the UIR is not a startup related issue however the basis for the NCR disposition does not adequately document the above described installation basis and will be corrected

Conclusion:

NU has concluded that this issue reported in DR-MP3-01009 has identified a CONFIRMED SIGNIFICANCE LEVEL 4 condition which requires correction. This discrepancy meets the criteria specified in NRC letter B16901 and 17010. It has been screened per U3 PI-20 criteria and found to have no operability or reportability concerns and meets the Unit 3 deferral criteria. This item meets the deferral criteria of section 1.3.2.e of U3 PI-20. CR M3-98-1143 has been written to correct the original item post startup. CR M3-98-1143 has been closed to BIN CR M3-98-0135. CR M3-98-2631 has been written to identify that the disposition of NCR 395-065 does not clearly state the bases for the decision, and to correct this post startup.

Previously Identified by NU?	🔿 Yes 🛞 No	Non D	iscrepant Conditio	m? Ves	No
Resolution Pending	g? Yes 🖲 No	Rei	solution Unresolve	d?O Yes	No
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	Sheppard, R. P. Ryan, Thomas J Schopfer, Don K Singh, Anand K 5/19/98	Acceptable	Not Acceptable	Review Needed	Date 5/27/98 5/27/98 5/27/98
	Sal 5 Comments	TO NOS FI	ist Response	0 G & 20 M W D W W	

This ACR was identified as a "Start-up" document. Unless a specific reason acceptably dispositions this ACR as to why

Northeast	Utilities
Millstone I	Unit 3

verification of completion will be delayed till after plant start-up, this DR resolution is unacceptable.

S&L's Comments to NU's Second Response

NU's Response is unacceptable.

NU has not provided a copy of the "engineering review" documentation as noted in the NCR 395-065 ADMIN Disposition. This "engineering review" provided the justification that the nonconforming conditions were determined not to be valid; consequently, justifying the NCR closure as Admin and not requireing any field changes. This "engineering review" was requested in this DR but not received.

NU has not indentified what actions they intend to take after startup per CR M3-98-1143. Note: CR M3-98-1143 references "Historical Record Cleanup".

Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Repo	DR No. DR-MP3-1011			
Review Group:	Operations & Maintenance and Testing	DR RESOLUTION ACCEPTED			
Review Element:	Modification Design	Potential Operability lesus			
Discipline:	Mechanical Design	Potential Operadimy issue			
Discrepancy Type:	Design Control Procedure	No			
System/Process:	DGX	0			
NRC Significance level:	3	Date FAXed to NU:			
		Date Published: 3/5/98			
Discrepancy:	Unreviewed Safety Questions Diesel Generators	Concerning the MP-3 Emergency			
Description:	Modification 3-91-196 (MOD) was reviewed and issued by NU's PORC on 12/4/91. The PDCR package was completed and submitted to Nuclear Records on 8/15/92. The need for the modification was that the fuel oil sample point was down stream of the strainers that remove particulate of 200-mesh size or larger from the fuel oil. Consequently, the strainers could affect the sample porticulate analysis. The purpose of the modification is to perma couly remove the strainer elements from strainer housings 3EGF*STR1C and 3EGF*STR1D (one of two on each Diesel) allowing for a more representative sample of sediment in the fuel oil.				
	The design requirements for the Emergency Diesel Fuel Oil System, in part, are as stated below:				
	Section 9.5.4.1 of the FSAR, 'I design bases for the EGF sha 1. In accordance with Regulato systems design, fuel oil quality 2. In accordance with General capability of the fuel oil system redundancy criteria.	Design Bases', states that the III be: bry Guide 1.137, for fuel oil y, and tests. Design Criterion 17, for the in to meet independence and			
	The removal of one of the stra the redundancy which is requir systems on each Diesel. This FSAR, Section 9.5.4.2 System flow path consists of a fuel oil capacity fuel oil transfer pump piping to each respective diese	iners from each Diesel, removes red in the two fuel oil transfer item is also described in MP3's in Description, which states: "Each storage tank, two 100 percent is and strainers, a day tank, and el engine			
	Regulatory Guide 1.137, Section C, 'Regulatory Position states "1. The requirements for the design of fuel-oil systems for dies generators that provide standby electrical power for a nuclear power plant that are included in ANSI N195-1976, 'Fuel Oil Systems for Standby Diesel-Generators,' provide a method acceptable to the NRC staff for complying with the pertinent requirements of General Design Criterion 17".				
	ANSI N195-1976, Section 6.3, be provided for each engine. as required to prevent overloa strainer shall be of duplex des	'Strainers', states: "A strainer shall The mesh of the strainers shall be ding of the engine fuel filter. The ign".			
Printed 5/28/08 10:25:48 6M	The original design of the EDC compliance with ANSI N195-1	5 Fuel Oil System is also in non- 976, which requires Duplex			

ICAVP Discrepancy Report

Strainers. A single Y-type strainer is installed in each Fuel Oil Subsystem instead of the Duplex Strainers.

Table 1.8-1 of MNPS-3 FSAR states that NU will comply with Reg. Guide 1.137 except for the cited clarifications and exceptions. The only exception taken, is that MP-3 has 3-day storage tanks for each Diesel, instead of the required 7-day tanks.

It should also be noted that ACR M3-96-0240 was written to track a 'Difference in Professional Opinion (DPO), due to a 'concern' from NU's Nuclear Safety Engineering group. The 50.54f EDG Review Team questioned the technical justification for this MOD and whether or not it could result in a potential reduction in reliability. The conclusion of this ACR was that the strainers should remain removed, because "There is also less risk of an EDG failure with the cartridges removed than with them installed". No basis for this assumption is included in the ACR.

The Safety Evaluation performed by NU determined that NO Unreviewed Safety Question (USQ) exists. However, ICAVP believes that this Safety Evaluation is deficient. This is due to the fact that NU's Safety Evaluation appears to have only looked at the 'C' and 'D' strainers being used during the Fuel Oil Sample Surveillance. No evaluation of the long term effects of operating with the unstrained oil pump was performed. Further, no analysis was performed to determine the effects on sludge carry-over or its effect on the engine fuel filters as the tank levels diminish. This review should have included an analysis of the 10% minimum level allowed in the Fuel Oil Storage Tanks and some minimal level in the Day Tanks when operated in manual utilizing operators. NU did not take into account that the unstrained pumps 'C' and 'D' are also the ones which have dual electrical feeds, making them the more reliable Fuel Oil Transfer Sub-Systems during a LOP event .

NU's FSAR Section 9.5.4.2, 'System Description', Item 2 states: "Each pump has sufficient capacity to fill both day tanks with both emergency generators running, since the fuel consumption at rated load and speed for one emergency generator is 6.16 gpm." This implies that if one Fuel Oil Storage Tank were inoperable, then both EDG's would be feed from one tank. This means that the operable storage tank would be filled on approximately a daily bases, without any provision for settling time. Worst case would be with an unstrained pump in-service.

The FSAR does not adequately address that any exceptions to the design requirements was taken for the MOD (see Table 1.8-1 of NU's FSAR). It should be noted that the language concerning the MOD in Sections 8 and 9 of the FSAR is ambiguous and not all required parts of the FSAR reflect the MOD. These include, in part:

1. FSAR, Section 9.5.4.2: "Each flow path consists of a fuel oil storage tank, two 100 percent capacity fuel oil transfer pumps

Northeast Utilities	ICA	VP		DR No. DR	MP3-1011
Millstone Unit 3	Discrepan	cy Repo	ort		
	and strainers, a da engine." 2. FSAR, Section provided for each 3. FSAR, Section incorporated in the minimum required conditions: loss outage or failure of pump associated to off-site power coin either emergency It is not clear that their 'as designed' M3-96-0240), this before the normal prolonged period of	y tank, and 9.5.4.2, Iter diesel gene 9.5.4.3: As e system de safety func of off-site p of one emerg with each er cident with generator fu the pumps of system alig means that lead pump of time.	piping to ea n 6: "A duple rator by the rator by the a result of th sign, the EG tion under a ower coincid gency generat mergency generat merg	ch respective ex fuel oil stru- manufacture e redundance F system pro- ny one of the dent with ma- ator fuel oil to enerator; and e outage or f e tank. hers installed NU's admiss ed pump ma- unstrained oil	e diesel ainer is r." by by ides its e following intenance ransfer d loss of ailure of are still in ion (ACR y start I for a
initiator:	From the available determine if the M definitely result in Significance Leve response, the DR'	e informatio IOD design both EDG's I of 3 is ass s NRC Sign Valid	n, the ICAVF of the EDG f being inope igned. Howe ifficance Leve Invalid	P Team could Fuel Oil Syst rabie. Thus ever, based o el could esc Review Needed	d not em would a NRC on NU's alate. Date 2/24/98
VT Lead: VT Mgr: IRC Chmn:	Bass, Ken Schopfer, Don K Singh, Anand K				2/25/98 2/26/98 3/2/98
Date: INVALID:					
Date: RESOLUTION:	5/26/98 Disposition: Northeast Utilities the corrective acti FSAR Table 1.8-1 fuel oil piping stra 1976. Revise FS the configuration lines. The justific is supported by th quality stored exc manufacturer. Th following points: (the storage tank;	RP4-2 CR on plan for to identify iner design AR Section of the strain ation for this e MP3 proc eeds the strain e justification 1) Sampling (3) Condition	Change Forr CR M3-98-13 the difference and section 1 9.5.4 as requ ers in the tra s difference f edures which andards reco on should inco of the oil re n of the fuel	m (attached) 373 as follow es between 1 6.3 of ANSI uired to clear nsfer pump of from the ANS h assure that mmended by clude discuss ceived; (2) C oil piping; (4	revised vs: "Revise MP3 DG N195- ly describe discharge SI standard the oil y the diese ion of the condition o

of the sample line prior to taking the sample." NU has concluded this DR to be a "CONFIRMED DISCREPANT" Significance Level 4 issue.

Conclusion:

Northeast Utilities RP4-2 CR Change Form (attached), revised

Northeast Utilities Millstone Unit 3	ICA Discrepar	VP ncy Repo	DF	No. DR-N	AP3-1011
	the corrective acti Section 9.5.4 as n the strainers in the Table 1.8-1 to ide piping strainer des provide the justific standard. NU has DISCREPANT" Si	on plan for equired to c e transfer puntify the diff sign and sec cation for the concluded gnificance l	CR M3-98-1373 learly describe ump discharge I erences betwee dion 6.3 of ANS is difference fro this DR to be a Level 4 issue.	to revise f the configu ines, revise on MP3 DG I N195-197 m the ANS "CONFIRM	FSAR ration of FSAR fuel oil 76 and to I MED
Previously Identified by NU?	🔿 Yes 🛞 No	Non D	iscrepant Conditio	m?() Yes	No
Resolution Pendin	g? Yes 🖲 No	Re	solution Unresolve	d? Yes	No
Initiator: VT Leæd: VT Mgr: IRC Chmn: Date: SL Comments:	Spear, R. Bass, Ken Schopfer, Don K Singh, Anand K 5/26/98 S&L concurs with 1373 as described the item as pendir Safety Evaluation S&L has reviewed Change Request addresses all the Discrepancy Repo	Acceptable	Not Acceptable	Needed	Date 5/2C/98 5/26/98 5/27/98 M3-98- msiders the FSAR / FSAR ned that it s

Northeast Utilities	ICAVP			DR No. DR-MP3-106		
Millstone Unit 3	Discrepand	cy Repo	ort			
			00.05201		ED	
Review Group:	System		DR RESOL	UTION ACCEPT	ED	
Discipline:	Mechanical Design		Potential Operability Issue			
Discrenancy Type:	Procedure Implementation			O Yes		
System/Process:	NEW			No		
NRC Significance level:	NA			ate FAXed to N	u:	
				Date Bublishe	4. 2/28/08	
Discrepancy:	Incomplete docume	entation im	plementing	changes to	u. 2/20/80	
Description:	In the process of re associated DCN-00	viewing m -1122-97 t	odification D he following	CR M3-9706 is noted.	3 and	
	DCN-00-1122-97 st Changes Required,	ates on pa	ge 3 under 1	the topic Spe	cification	
	"Add snubber mark PSSP460 to the sn ME-570."	nos. 3-RS ubber list, i	S-4-PSSP4 Appendix U	59 and 3-RSS of Specificati	S-4- ion SP-	
	Based on a review of the subject DCN, no change paper incorporating the changes to Appendix U of Specification SP-ME 570 could be identified.					
	In addition, the sub new pipe supports a these cases should supports contained The subject DCN d specification or incl implementation.	ject DCN a and the del be reflected in Append oes not me ude any ch	also identifie letion of one ed by chang lix M of Spe- ention this p- nange paper	s the addition support. It is es to the listin cification SP- otential chang to reflect its	of other believed ng of pipe ME-570. ge to the	
	Discrepancy:					
	DCN DM3-00-1122 implement the note Appendix U and do changes to Append	-97 does n ed changes es not ider lix M of the	to specificantify or imple same spec	hange paper tion SP-ME-5 ement potenti ification.	to 570 al	
		Mallet	Investig	Review	Dete	
le Marten	Okon P.P	Valid	Invalid	Needed	2/20/08	
Initiator:	Mad Anthony A			Ц	2/21/08	
VI Lead:	Schooler Dep K			Ц	2/21/90	
VI Mgr:	Singh Apard K			Ц	2/25/09	
INC CIMIN:	Singh, Anano K				223/80	
Date: INVALID:						
Date:	5/27/98		an formal of the design of the design of the second data and		alan kana kana kana kana kana kana kana	
RESOLUTION:	Response ID: M3-I	RF-02231				
	Disposition:					

NU has concluded that the issue reported in Discrepancy Report, DR-MP3-1068, does not represent a discrepant condition. DCN DM3-00-1122-97 lists SP-ME-570 as an affected document to

Millstone Unit 3	Discrepa	AVP ncy Repo	DR	No. DR-N	IP3-1068
	add the new snubbers. DCN DM3-05-1122-97 (attached) was issued to supplement DM3-00-1122-97 to add all the pertinent information concerning the new snubbers. Additionally, no				
	seismic supports specification is fo credited, not to lis	were affecte ir seismic sup st all seismic	 d. This Append oports on Class supports in ger 	dix to the 4 lines whi heral.	ch are
	Significance Leve discrepant condit	el Criteria do ion.	es not apply as	this is not a	B
	Attachments:1)	DCN DM3-0	5-1122-97		
	Conclusion:NU hi Discrepancy Rep discrepant condit included in DCN required to Appen Significance Leve	as concluded ort, DR-MP3 ion. The upd DM3-05-112 ndix 'M' of SI el Criteria do	I that the issue -0987, does not ate to Appendix 2-97 and there P-ME-570. es not apply as	reported in t represent ('U' SP-ME is no updat this is not i	a :-570 is e a
Previously Identified by NU?	Yes No	Non D	iscrepant Conditio	m? Yes	O No
Resolution Pending	3? Yes 🔘 No	Re	solution Unresolve	kl? Yes Review	No
Initiator: VT Lead:	Olson, P.R. Neri, Anthony A Schopfer, Don K	Acceptable	Not Acceptable		Date 5/27/98 5/27/98
VT Mgr: IRC Chmn:	Singh, Anand K	H	Н	й	5121100
VT Mgr: IRC Chmn: Date:	Singh, Anand K 5/27/98		Н		Gizmao
VT Mgr: IRC Chmn: Date: SL Comments:	Singh, Anand K 5/27/98 S&L agrees with Appendix U to SI 1122-97) was ide and corrected in It is noted howev provided by NU v Also, based on f ME-570 does rec	NU's response P-ME-570 (or entified by NU the subseque rer, that Rev. with the review urther review urther an update	se that the requiring the more that the requiring the more that the requiring the more that the the the the the the the the the th	irred update in DCN D dification p on, DM3-05- was not in DCR M3-97 t Appendix	e for M3-00- rrocess -1122-97 itially 7063. M of SP-
VT Mgr: IRC Chmn: Date: SL Comments:	Singh, Anand K 5/27/98 S&L agrees with Appendix U to SI 1122-97) was ide and corrected in It is noted howev provided by NU v Also, based on f ME-570 does red Editorial corrected corrected to read	NU's response P-ME-570 (or entified by NU the subseque rer, that Rev. with the review further review quire an updation. The last st l as follows;	se that the requiring inally missing J during the mo ent DCN revision 05 of this DCN we package for w, we agree that the sentence in the	ired update in DCN D dification p on, DM3-05 I was not in DCR M3-91 t Appendix paragraph	e for M3-00- rrocess -1122-97 itially 7063. M of SP- above is

ICAV^P Discrepancy Report

listone Unit 3	Discrepancy Repo	ort
Review Group:	System	DR RESOLUTION ACCEPTED
Review Element:	Corrective Action Process	Potential Operability Issue
Discipline:	Mechanical Design	⊖ Yes
Discrepancy Type:	Corrective Action Implementation	No No
NRC Significance level:	A	
into organisance ieven.	-	Date FAXed to NU:
		Date Published: 3/12/96
Discrepancy:	ACR M3-96-0653 Corrective / Action Plan	Action Inconsistent with Corrective
Description:	ACR M3-96-0653 identified th Access Enclosure to flood and and B isolation valves to CW [3SWP*MOV115A/B] without indication of flooding in the ar- which is non safety related. Th room is only infrequently acce- included placing the area on r the level switch, and/or upgrat The possibility was also raised demonstrate that SWP could isolating the lube water to the	e potential for the Chlorine Pit d submerge both the SWP Train A Pump Lube Water operator knowledge, since the only ea is via level switch 3SWP-LS153 he ACR also indicated that the essed. The recommended action ounds, performing surveillance on ding the switch [to safety related]. d of performing analyses to function satisfactorily without CW Pumps.
	The Corrective Action Plan in evaluations have determined of the 30" SWP lines in the ac isolation valves in less than 3 3SWP*MOV115A/B were disa service water flow to vital load would still be available."	dicated that "preliminary that a moderate energy line break ccess enclosure would flood the 0 minutes" and that "if abled due to flooding, sufficient ds during design basis conditions
	The Corrective Action Plan ca result:	alled for the following activities as a
	1. Formally update the service that sufficient service water is design basis conditions with fi and	e water analysis to demonstrate available to vital loads during low to the CW pumps not isolated,
	2. Evaluate removing 3SWP* status and the GL 89-10 MOV	MOV115A/B from "active valve" / Program.
	Section 7 of the Corrective Ad	ction Plan further states:
	"The criteria employed by MP 30 minutes of operator time, f related instrument, to isolate t related equipment. Revising t demonstrate isolating service during design basis conditions active safety function of 3SW	3 flood studies is the availability of following detection by a safety the leak before affecting safety he service water flow analysis to water flow to the circ water pumps is is not required will remove the 'P*MOV115A/B."
	All of the above are tracked u 96029368-02.	nder Tracking Assignmment #

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In lieu of the corrective actions described above, a CR Change Page 1 of 7

Form was initiated. Section 7 of this form, "Justification" states:

"The amount of flow that would be lost if valves 3SWP*MOV115A/B were unable to close due to flooding would be unacceptable. Calculations have shown up to an 11% decrease in flow to SW heat exchangers would occur. Instead of accepting condition, ensure level switch 3SWP-LS153 will operate to prevent flooding condition from occuring prior to a design basis condition."

In turn, a CR Action Closeout Form was completed, indicating that the amount of flow loss would be unacceptable if the MOV115 valves did not isolate when required, and stated that a "Preventive Maintenance Change Form had been initiated to ensure the level switch 3SWP-LS153 is checked for proper operation on an annual basis."

This action is not adequate from the tollowing perspectives:

1. As stated in the ACR Corrective Action Plan, the MP3 flooding study methodology assumes 30 minutes of operator time, after detection by a safety related instrument, to take action to isolate the break before affecting safety related equipment. In this case there is no safety related instrument to provide the notification.

2. Even if the switch were upgraded to safety related, it could not provide adequate warning to the operator based on the NU analysis that the room would flood in less than 30 minutes.

3. Since the isolation valves for both SWP divisions are located in the same room, the potential exists for degrading both divisions due to failure from a single event - the flooding of the room.

4. While it is not included in the scope of the ACR it is also noted that the two air operated safety related isolation valves [3SWP*AOV25A/B, one for each division] for isolation of the non safety related chlorination dilution water are also located in the same SW access enclosure and subject to the same flooding conditions as the MOV115A/B valves. [See also DR-MP3-0998.]

5. In addition to the flooding concerns, as identified in Items 3 and 4 above, the requirement for physical separation of the two redundant SWP divisions is not satisfied as a result of the two instances of Train A and Train B isolation valves being located in the same room - i.e. the SWP access enclosure.

		Valid	Invalid	Review Needed	Date
Initiator:	Tenwinkel, J. L.	\boxtimes			3/3/98
VT Lead:	Neri, Anthony A				3/4/98
VT Mgr:	Schopfer, Don K				3/6/98
IRC Chmn:	Singh, Anand K				3/9/98



INVALID:

Date: 5/27/98

RESOLUTION: 1st response:

Disposition:

NU has concluded that Discrepancy Report, DR-MP3-1072, has identified a condition not previously discovered by NUwhich requires correction.

The corrective actions associated with ACR M3-96-0653 correctly reported that sufficient service water flow would be available to the RSS heat exchangers following a service water pipe rupture (MELB) in the chlorination pit, with floor⁴⁷ g of the pit, and associated failure (open) of the service water valves 3SWP*MOV115A&B. A CR change form (attached) was subsequently processed that revised the evaluation to indicate that there would not be sufficient service water flow to the RSS heat exchangers (11% deficit) should valves 3SWP*MOV115A&B fail to close.

Both of the evaluations can be correct, depending on the initiating accident. FSAR section 3.1.1.3, "Applications of Single Failure Criteria" clearly states that a LOCA/CDA and a single active failure can be postulated in the near term (<24 hrs.) However, a LOCA with a single "passive" failure (MELB) connot be postulated until the long term(>24 hrs.). Consequently, it was correct to describe the scenario of a service water MELB (3SWP*MOV115A&B failed open - no LOCA/CDA) with sufficient service water flow (no RSS heat exchanger flow required). It was also correct to postulate a LOCA/CDA with associated closure of 3SWP*MOV115A&B, thereby assuring adequate service water flow to the RSS heat exchangers (no SWP MELB).

As depicted in the DR scenario, a service water MELB, with concurrent failure (open) of valves 3SWP*MOV115A&B does not prevent the service water system from delivering design flow to the service water components. A LOCA/CDA, coincident with service water MELB, is not a "near term" design basis accident per FSAR Single Failure Criteria described in section 3.1.1.3. Service water calculation 97-41, accident scenario 2, (attached) provides the basis for 3SWP*MOV115A&B failure (open) with subsequent CWP line break.

Because flooding calculation, 12179-P(k)-1072R does not specifically address the MOVs and flooding in the service water chlorination pit, enhancements will be made to the calculation. The flooding concerns needs to be updated to document the acceptability of the 3SWP*MOV115A&B valves remaining open during a service water MELB in the chlorination access pit enclosure. These are the corrective actions of CR M3-98-1253 and will be completed after re-start. Since these changes do not effect the ability of the system to fulfill its safety function, NU dces not consider this to be a level 3 discrepant condition. Therefore, NU recommends downgrading this DR to a level 4 discrepant condition based on the lack of a supporting evaluation

in the current Flooding Hazard Analysis.

The DR con <u>in</u> surrounding the flooding time versus the operator response time becomes irrelevant when isolation of valves 3SWP*MOV115A and B are no longer necessary. The chlorination pit level switch, 3SWP-LS153 will continue to be maintained in good working order by way of the previous corrective actions of ACR M3-96-0653 which provides an annual preventive maintenance activity. The function of the level switch will serve as an indication of a flooding event. As described above, timely operator actions are not critical during the mitigation of a design basis accident. The level switch will remain as a non-safety related component since immediate operator actions are not required to mitigate a DBA in order to maintain design consistency with the rest of the plant.

The affect of flooding on the two air operated isolation valves, 3SWP*AOV25A/B is not a concern since these valves fail closed (reference DR# M3-DRT-0998 (M3-IRF-01725)). The double valves provide positive isolation between one train of the service water system and the non-safety related chlorination system.

Conclusion:

NU has concluded that Discrepancy Report, DR-MP3-1072, has identified a condition not previously discovered by NUwhich requires correction.

Based on the scenario of an assumed service water moderate energy crack, a concurrent CDA is not required to be postulated. Therefore the RSS heat exchangers will present no load upon the system since no CDA would occur. With the 3SWP*MOV115A&B valves unisolated, aJequate flow will still be maintained to the safety related heat exchangers.

The approved corrective action plan for CR M3-98-1253 will ensure the following:

1. Update the flooding calculation 12179-P(R)-1072R to indicate why flooding in the service water chlorine pit is not of any consequence to the service water system. This action is being tracked under A/R 98004879-04 and is scheduled to be completed following re-start.

2. Develop a formal design input regarding the acceptability of 3SWP*MOV115A&B remaining open during a service water MELB in the service water chlorine pit. This action is being tracked under A/R 98004879-01 and is scheduled to be completed following re-start.

Since this DR requires multiple failures for the concerns to be valid, versus the single failure criteria in the determination of credible events as stipulated in the Millstone Licensing basis, NU does not consider the effects of a flooding event to be a discrepant condition. NU does consider the lack of a supporting evaluation within the Flooding Hazard Analysis to be a

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ICAVP Discrepancy Report

DR No. DR-MP3-1072

discrepant condition. Since these changes do not effect the ability of the system to fulfill its safety function, NU does not consider this to be a level 3 discrepant condition. Therefore, NU recommends downgrading this DR to a level 4 discrepant condition. The approved corrective action plan will revise the Flooding Hazard Analysis post startup.

2nd response:

As a result of telecons with S&L, NU provided the following revised response:

Disposition:

NU has concluded that the issues reported in DR-MP3-1072, have identified a CONFIRMED SIGNIFICANCE LEVEL 4 CONDITION.

ACR M3-96-0653 makes some incorrect statements concerning the design basis of Millstone 3 systems used for evaluating the effects of postulated line breaks in non safety related systems. The response to this DR is being revised to acknowledge that although the results of the corrective action plan to ACR M3-96-0653 will be unchanged, some of the statements concerning the design basis for postulating moderate energy cracks and breaks are incorrect.

To demonstrate that high energy and moderate energy systems are in compliance with GDC 4, a review is performed to the criteria specified in NRC BTP's ASB 3-1 and MEB 3-1. These BTP's provide guidelines for postulating piping failures. These failures are considered to be initiating events during normal plant operation and are not assumed to occur concurrently with a design basis accident. In accordance with ASB 3-1, a single active failure as well as failures which are direct consequences of the initiating event are also to be assumed. As a result of this postulated failure, direct consequences and single failure, the functional capability of essential systems and components should be maintained. In cases where operator action is required to mitigate the consequences of the postulated line break in order to protect the capability of safe plant shutdown, an appropriate operator response time is assumed, and CAT I detection is required.

As stated in FSAR Section 3 1.1.3, systems required to mitigate the consequences of Chapter 15 accidents are designed to tolerate a single active failure in addition to the incident which requires their function. The infrequent incident or limiting fault identified here is NOT considered concurrently with the postulated piping failures described above which demonstrate plant conformance to GDC 4.

ACR M3-96-0653

This ACR was written to identify that if there was a postulated pipe rupture in the Intake Structure Access Enclosure the seal water supply valves to the circulating water pumps,

ICAVP Discrepancy Report

3SWP*MOV115A&B could become submerged without operator knowledge since flood detection is only provided with a non QA level switch. The ACR further concludes that this could result in a failure in both trains of the service water system. Section 7 of the ACR corrective action plan states that ... "The criteria employed by MP3 flood studies is the availability of 30 minutes of operator time, following flood detection by a safety related instrument, to isolate the leak before affecting safety related equipment." For application to the piping arrangement which is the subject of the ACR, this statement is not applicable. A postulated failure of any line within the access enclosure could flood the entire room and cause the valves 3SWP*MOV115A&B to fail such that they remain open. This is postulated under the stipulations of ASB 3-1 and MEB 3-1. In accordance with these BTP's, the plant is assumed to be in a normal operational mode. For this case, service water system calculations confirm that adequate service water flow will continue to the system components. Inoperability of these valves will also not prevent normal, safe shutdown of the plant. It is for these reasons that no operator action is required within a specified time period to terminate the flood. If allowed to go undetected, the flood will not disallow a normal safe plant shutdown. Based upon this, a nonsafety related level switch for flood detection is acceptable.

This "hazards" review of the system does not require the assumption of a design basis accident. Therefore the safety related functions of the service water system are unaffected by this postulated piping failure and resulting flood. The valves are designed to close in the event of a DBA in order to provide isolation of the non safety portion of the service water system. A MELB in the non safety portion of the SWP system is not required to be postulated concurrently with the DBA event.

CR M3-98-1253 was previously generated to update the flooding analysis as documented in M3-IRF-01941. CR M3-98-2628 has been generated to document the fact that there is incorrect information in CR M3-96-0653. This CR was generated for trending and documentation purposes only. No additional corrective actions will be taken for this historical condition. The incorrect information in ACR M3-96-0653 is the discrepant condition identified.

Conclusion:

NU has concluded that the issues reported in DR-MP3-1072, have identified a CONFIRMED SIGNIFICANCE LEVEL 4 CONDITION.

A postulated failure of any line within the access enclosure could flood the entire room and cause the valves 3SWP*MOV115A&B to fail such that they remain open. This is postulated under the stipulations of ASB 3-1 and MEB 3-1. In accordance with these BTP's, the plant is assumed to be in a normal operational mode. For this case, service water system calculations confirm that adequate service water flow will continue to the system components. Inoperability of these

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Northeast Utilities Millstone Unit 3	Discre	ICA	VP Icy Repo	ort	R No. DR-	MP3-1072
	valves will al It is for these specified tim undetected, t shutdown. B flood detection	so no reas e pen he flo ased on is	t prevent no ons that no lod to termin bod will not upon this, a acceptable.	ormal, safe shu operator action hate the flood disallow a norm nonsafety rela	tdown of th is required If allowed t hal safe pla ted level so	e plant. I within a to go nt witch for
	The "hazards assumption of related function this postulated designed to of isolation of the MELB in the required to b CR M3-98-12 analysis as of been general information in trending and corrective act incorrect infor- condition ide	s" rev of a d ions of ed pip close ne no se pos 253 w ocum ted to n CR docu docu tions ormati ntifie	iew of the s esign basis of the service ing failure a in the event in safety portion tulated control tulated control tulated control as previous nented in M3 document M3-96-065 mentation p will be take on in ACR I d.	ystem does not accident. Ther e water system ind resulting flo t of a DBA in or tion of the serv n of the SWP s currently with the ly generated to 3-IRF-01941. C the fact that the 3. This CR was purposes only. If n for this histor M3-96-0653 is the	require the efore the s are unaffe od. The va- der to prov- ice water s system is no the DBA even update the R M3-98-20 ere is incom- generated No addition- ical condition the discrepa	efety cted by alves are ide ystem. A ot ent. eficoding 628 has rect for al on. The ant
Previously identified by NU?	O Yes) No	Non D	iscrepant Condition	m? Yes	No No
Resolution Pendin	g? Yes	No No	Re	solution Unresolve	ed? Yes	No No
to History	Tenvinkel 11		Acceptable	Not Acceptable	Review Needed	Date
VT Lead:	Neri Anthony A					5/27/98
VT Mor:	Schopfer, Don K		\boxtimes			5/27/98
IRC Chmn:	Singh, Anand K					5/27/98
Date:	5/27/98					
SL Comments:	Based on the via telecon, i item be down	e revi S&L i ngrad	sed respons s in agreem ed from Lev	e provided by I ent with NUs revel 3 to Level 4	NU after dis esponse and	d that thi

Northeast Utilities	ICAV			DR NO. DR-	MP3-10/4	
Allistone Unit 3	Discrepancy	Repo	ort			
Review Group:	Operations & Maintenance ar	d Testing	DR RESOLU	JTION ACCEPT	ED	
Review Element:	Corrective Action Process			otential Operal	bility issue	
Discipline:	Other Corrective Action Implementa	tion		O Yes		
System/Process:	SWP	ites and		No		
NRC Significance level:	4		D	ate FAXed to N	u•	
				Data Bublisha	4. 2/5/00	
Disconstance	landen, de landen en	Anting F	Convine Ma	Los Custom t	a. ararso	
Discrepancy.	corrective action.	tation of	Service wa	iter System t	esting	
	Problems Affecting Sa test program be condu- of all safety-related he The Generic Letter sta should be at least once best frequency for tes assurance that the eq functions. Unresolved Issue Rep Testing documents th accomplished as requi- action for this UIR ince exchanger testing sch A review of the UIR of that the heat exchange not meet the intent of schedule does not inco cooled by service wat that each safety related tested at least once e	Item 2 of Generic Letter (GL) 89-13, Service I Problems Affecting Safety-Related Equipment test program be conducted to verify the heat to of all safety-related heat exchanges cooled by The Generic Letter states that the initial freque should be at least once each fuel cycle, but af best frequency for testing should be determine assurance that the equipment will perform the functions. Unresolved Issue Report (UIR) # 515, GL 89-1 Testing documents that heat exchanger testing accomplished as required by the Generic Letter action for this UIR includes developing a "posi exchanger testing schedule." A review of the UIR corrective action implement that the heat exchanger testing program is ina not meet the intent of Generic Letter 89-13. T schedule does not include all safety related he cooled by service water. The action tracking i				
				Peview	Dete	
Initiator	Spear R	Vand	Invalid	Meeded	2/26/08	
VT Lead	Bass Ken	M	H		2/26/98	
VT Mor	Schopfer, Don K	M	Н	П	3/2/98	
IRC Chrnn:	Singh, Anand K	X	П	Ē	3/2/98	
Date	<u></u>	-		keer1		
INVALID:						
Date	5/27/98	and in the second distance	Contest state data data data data data data data	1965-9955-99-99-99-99-99-99-99-99-99-99-99-	ACCORDING & STOL STRANDS WAS	
RESOLUTION	Disposition:					
	NU has concluded that identified a condition requires correction. It 01) required the deve for completing the Ge heat exchanger tests AR96008622-01 and of the MP3 Service V Monitoring Program v Letter 89-13 requirem	at Discre not prev JIR #515 lopment eneric Le and eva AR97000 Vater He which for eents and	pancy Repo iously discover of a firm and tter 89-13 set luations of the 0669-02 track at Exchange malize the control of the discover	rt DR-MP3-1 vered by NU action (AR96 d accelerated ervice water he test data. ked the deve er Performan ommitment t	074 has which 008622- d schedule system Both elopment ce o Generic natic	
			in provines	programmi	Derector	

ICAVP **Discrepancy Report**

DR No. DR-MP3-1074

means to schedule the testing of heat exchangers and to evaluate the test results. The discrepant Final Disposition of UIR #515 will be corrected after startup by the approved corrective action plan for CR M3-98-1279 to reference the performance monitoring program which provides the requested heat exchanger testing schedule and commitment to GL 89-13. The Significance Level is concluded to be Level 4 since there is no impact on MP3 DB or LB or plant equipment.

Conclusion:

NU has concluded that Discrepancy Report DR-MP3-1074 has identified a condition not previously discovered by NU which requires correction. UIR 515 Closure Request Final Disposition will be corrected after startup by the approved corrective action plan of CR M3-98-1279 to reference the MP3 GL 89-13 Service Water System Heat Exchanger Performance Monitoring Program which implements the requirements of Generic Letter 89-13 and provides testing schedules. The Significance Level is concluded to be Level 4 since there is no impact on MP3 LB or DB or plant equipment.

Revised response received 4/23/98:

Disposition:

NU has concluded that the new issue reported in Revised Discrepancy Report DR-MP3-1074 has identified a condition not previously discovered by NU which requires correction. The heat exchanger testing frequency stated in the conclusion to UIR 515 deviates from the testing requirements contained in Generic Letter 89-13, 13 are included in the licensing bases. This Discrepancy Report and NU's conclusion establish that the Heat Exchanger Testing program is not being accomplished as required by the Generic Letter and therefore does not meet the licensing bases. The criteria for determining the relative discrepancy significance level establishes that if a discrepancy does not meet its licensing and design bases but the system is capable of performing its intended function, it is a level 3 discrepancy. After discussion and agreement with the NRC Inspection Team, clarification of the responses to Generic Letter 89-13 is required prior to start-up. AR 97030287-08 requires preparation of a NRC

submittal formally proposing the change in heat exchanger testing frequency from the requirements of Generic Letter 89-13. The submittal is to be made prior to start-up. The proposed testing frequency is consistent with the Generic Letter 89-13 recommendations for initial test frequencies. The retest and cleaning schedules will be based upon the initial testing results. The maximum period between tests is five years once a retest frequency is established. In addition the conclusion of UIR 515 will be revised accordingly after startup by the approved corrective action plan for CR M3-98-1279. Testing of individual groupings of MP3 SW heat exchangers in the program will be tracked by the following AR's: 97019658 3EGS*E1A/E2A

97019660 3EGS*E1B/E2B

Northeast Utilities		ICA	VP		DR No. DR-	MP3-1074
Millstone Unit 3	Disc	repand	cy Repo	ort		
	Discrepar previously Closure F corrective reference Exchange requireme will made 1074 is co	action pla e action pla the MP3 er Perform ents for the prior to st prior to st prior luded t	DR-MP3- ed by NU Il be revise an for CR GL 89-13 ance Mon e SW heat contained artup. The o be Leve	1074 has id which require M3-98-1279 service Wat itoring Progr exchangers d in a submit e Significant 4 since LB	entified a con- es correction. after startup t er System He- am testing The change ttal to the NRC ce Level for D and DB are m	dition not UIR 515 roved to at in testing C which R-MP3- net.
Previously Identified by NU?	O Yes	No	Non D	iscrepant Con	dition? Yes	No
Resolution Pendin	g? Yes	No	Res	solution Unres	olved? Yes	No No
			Acceptable	Not Acceptal	Review Needed	Date
Initiator:	Spear, R.					5/27/98
VT Lead:	Bass, Ken					5/27/98
VT Mgr:	Sinch Ann	dK				5/27/98
IRC Chimin:	Singh, Anan	an				
Date:	5/26/9	8				
	establish accomplis does not the relativ discrepan system is 3 discrepan	that the H shed as re meet the l ve discrepa icy does n capable o ancy.	eat Excha quired by t icensing b ancy signif ot meet its of performi	nger Testing the Generic ases. The c ficance level licensing ar ng its intend	program is n Letter and the riteria for dete establishes th d design base ed function, it	ot being erefore ermining hat if a es but the is a level
	NU has n issue. S& safety reli- Section tv should be my be adj the latest Recircula provide for adequate stated pre- issue and	ot provide &L has det ated heat wo of GL 8 at least o justed. The response tion Coole or excludine heat load eviously, in as such the as such the content of the such the content of the conte	enough a ermined th exchanger 19-13 state nce per cy his listing o does not in ers (3RSS) og safety re can not bo mplementa his is a Le	dditional info at the intent s be tested of s that initial rcle, but afte of SW heat enclude the Co "E1A-D). Gill elated heat enclude the do applied to the stion of GL 8 wel 3 Discret	ormation to res of GL 89-13 on a regular b testing freque r 3 tests the fr xchangers ind ontainment L 89-13 does exchangers wh the heat excha 9-13 is a licer bancy.	solve this is that all asis. incy requency cluded in not not anger. As nsing basi
	Further S	&L Comm	ents			
	S&L cond adequate provided Commiss informatio	to resolve in NU's Ma ion (NRC) on such the	e addition this issue ay 6 letter , Letter No at S&L cor	al informatio . The additi to the US N . B17205 pr includes that	n provided by onal informati uclear Regula ovided adequ NU's respons	NU is ion tory ate e is

ICAVP Discrepancy Report

DR No. DR-MP3-1074

acceptable. This letter clarifies NU's commitment to develop a program for testing Millstone Unit No. 3 Service Water Heat exchangers ad defined in GL 89-13. This program consists of baseline testing, a periodic retest program and additional actions to assess heat exchanger performance. This additional information combined with S&L's review of the inspection procedures provided enough information for S&L to concur with NU's response and the corrective actions described in the referenced documents.

S&L concurs with downgrading this u. crepancy to a Level 4 discrepancy based on the additional documentation provided and the telephone conferences.

S&L understands that NU has agreed to further revise the Basis document of EN 31084 to state the inspection of the Containment Recirculation Heat Exchangers described in EN 31084 provides the compliance with GL 89-13.

ICAVP Discrepancy Report

Review Group:	System		DR RESOL	UTION ACCEPTE	D		
Review Element:	System Design			Potential Operab	ility Issue		
Discipline:	Mechanical Design			(Yes			
Discrepancy Type:	Calculation			O No			
System/Process:	DGX			0			
NRC Significance level:	4		1	Date FAXed to NL):		
				Date Published	: 4/24/98		
Discrepancy:	Diesel generator s components supp	eismic quali lied.	fication rep	ort does not a	ddress all		
Description:	The following equipment was supplied under Spec. No. 2447.300 241. The seismic qualification report for the equipment supplied under this specification does not include any documentation of the adequacy of these items.						
	(1) 3EGS*H2A/B Generator Space Heater						
	The seismic qualification report for this space heater was requested on M3-RFI-855 and M3-RFI-873. The response provided on M3-IRF-02117 states that these heaters are an integral part of the generator stator, that there is no specific qualification for the heaters and that this equipment is seismically insensitive. The section of the Colt Industries report for the diesel generator skid pertaining to the generator was forwarded as part of the response. This report does address the generator stator; however, no justification is provided for the qualification of the space heater.						
	(2) 3EGD*EJ1A/B/C/D and 3EGD*EJ2A/B/C/D Exhaust and Air Supply Nozzle Expansion Joints						
	The qualification report for these expansion joints was requested on M3-RFI-855 and M3-RFI-873. The response provided on M3 IPF-02117 states that these bellows expansion joints are part of the diesel generator qualification. However, these expansion joints are not mentioned in the qualification report for the diesel generators.						
	(3) 3ENS*RES-GNA/B Neutral Ground Resistor						
	The seismic qualification report and equipment mounting calculation for this component was requested on M3-RFI-858 and M3-RFI-873. The response provided on M3-IRF-02117 states that this item is qualified by Colt, the diesel generator supplier. However, the Colt qualification report does not addres this component. Also, no calculation is available for the mounting of this component to floor.						
				Review	Dete		
		Valid	Invalid	Needed	4/14/00		
Initiator	: Johnson, Jay			Ц	4/15/00		
VT Lead	: Nerl, Anthony A				4/10/00		
VT Mgr	: Schopfer, Don K	\boxtimes			4/10/98		
IRC Chron	: Singh, Anand K	\boxtimes			4/17/98		



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ICAVP Discrepancy Report

INVACIO.

Date: 5/27/98

RESOLUTION: Disposition:

NU has concluded that Discrepancy Report, DR-MP3-1099, has identified a condition not previously discovered by NU which requires correction. The approved corrective action plan for CR M3-98-2126 will improve the seismic qualification documentation for 3EGS*H2A/B, 3EGD*EJ1A/1B/1D/2A/2B/2D, and 3ENS*RES-GNA/B. The improved documentation will provide more specific details of the basis for seismic qualification of these components.

Seismic qualification evidence exists for each of the three components, however, the evidence for these three components is somewhat less detailed than that for other components. The Colt Industries seismic qualification report package (#206072) provides varying details of seismic qualification documentation. The cover page states that "items for which no specific seismic analysis or test are shown are those items which, in normal operation, are subjected to forces and loads much greater than those imposed by a seismic disturbance and which, experience has shown, have substantial margin of safety."

3EGS*H2A/B relies on the general qualification for the stator contained in the Colt Industries seismic qualification report package (#206072). This component is a space heater mounted integrally inside the stator. The expansion joints, 3EGD*EJ1A/1B/1D/2A/2B/2D rely on the Colt's general qualification for skid mounted piping as supplemented by SWEC piping analysis. 3ENS*RES-GNA/B relies on General Electric qualification report 73LSP-1 which was not immediately retrievable in a search of plant records. This equipment was among the earliest purchases during the original design (~1977), and the apparent cause is the difference in viewpoint of an acceptable level of documentation between current practice and that held twenty years ago.

Items 1 and 2 of DR-MP3-1099 were not provided with specific component seismic qualification documentation at the time of purchase. Since they had been designed for more severe conditions, it was not considered necessary to provide detailed component specific seismic qualification documentation. Item 3 was provided with seismic qualification by General Electric, the supplier of the neutral ground resistor to Colt. This qualification could not be located in the course of a preliminary search. CR M3-98-2126 has been written, and its corrective action plan will provide the missing documentation following Unit 3 restart. NU concludes that the diesel generator is seismically qualified , and that it continues to meet its design basis. As such there is no effect on the license or design basis, therefore NU has concluded this to be a Significance Level 4 issue.

Conclusion:

NU has concluded that Discrepancy Report, DR-MP3-1099, has

Ortheast Utilities Millstone Unit 3	IC Discrepa	AVP Incy Repo	ort	RNO. DR-N	AP3-1099		
	identified a condition not previously discovered by NU which requires correction. The approved corrective action plan for CR M3-98-2126 will improve the seismic qualification documentation for the components in question. These actions will be completed following restart of Unit 3. In the case of items 1 and 2 no detailed component specific seismic qualification was provided because Colt generally qualified these components based on the operating forces exceeding the expected seismic forces. NU will improve documentation by providing more specific details for the basis for seismic qualification of these components. For item 3, the seismic qualification was not provided by Colt, but was instead supplied by General Electric. This docummentation has not been located yet. As part of the corrective action plan, the necessary documentation will be located or regenerated, post restart, to satisfy the requirement. The improved documentation will provide more specific details of the basis for seismic qualification of these components. NU concludes that the diesel generator is seismically qualified, and that it continues to meet its design basis. As such there is no effect on the license or design basis, therefore NU has concluded this to be a Significance Level 4 issue.						
Previously Identified by NU?	Yes N	lo Non D	iscrepant Conditio	m? Yes	No No		
Resolution Pendin	g? Yes IN	o Rei	olution Unresolve	d? Yes	No No		
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	Johnson, Jay Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date 5/27/98 5/27/98 5/27/98		