Sargent & Lundy

Don K. Schopter Vice President 312-269-6078

November 12, 1997 Project No. 9583-100

Docket No. 50-425

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 thirty-three (33) 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.

DR No. DR-MP3-0084	DR No. DR-MP3-0464	DR No. DR-MP3-0596
DR No. DR-MP3-0275	DR No. DR-MP3-0475	DR No. DR-MP3-0603
DR No. DR-MP3-0302	DR No. DR-MP3-0523	DR No. DR-MP3-0604
DR No DR-MP3-0306	DR No. DR-MP3-0528	DR No. DR-MP3-0606
DR No. DR-MP3-0325	DR No. DR-MP3-0542	DR No. DR-MP3-0607
DR No. DR-MP3-0378	DR No. DR-MP3-0552	DR No. DR-MP3-0614
DR No. DR-MP3-0428	DR No. DR-MP3-0571	DR No. DR-MP3-0616
DR No. DR-MP3-0436	DR No. DR-MP3-0573	DR No. DR-MP3-0633
DR No. DR-MP3-0446	DR No. DR-MP3-0574	DR No. DR-MP3-0634
DR No. DR-MP3-0449	DR No. DR-MP3-0575	DR No. DR-MP3-0639
DR No. DR-MP3-0456	DR No. DR-MP3-0594	DR No. DR-MP3-0651

I have also enclosed the following twelve (12) DRs that have been determined invalid. No action is required from Northeast Utilities for these twelve DRs. The basis for their invalid determination is included on the document.

DR No. DR-MP3-0282 DR No. DR-MP3-0283 DR No. DR-MP3-0283 DR No. DR-MP3-0284 DR No. DR-MP3-0399 DR No. DR-MP3-0417 DR No. DR-MP3-0417 DR No. DR-MP3-0431 40161 971112 ADOCK 05000422. PDF DR No. DR-MP3-0465 DR No. DR-MP3-0531 DR No. DR-MP3-0532 DR No. DR-MP3-0533 DR No. DR-MP3-0536 DR No. DR-MP3-0540 a 001

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United States Nuclear Regulatory Commission Document Control Desk November 12, 1997 Project No. 9583-100 Page 2

I have also enclosed the following five (5) DRs for which the NU resolutions have been reviewed and accepted by S&L.

DR No. DR-MP3-0138 DR No. DR-MP3-0152 DR No. DR-MP3-0208 DR No. DR-MP3-0249 DR No. DR-MP3-0408

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

Yours very truly,

D. K. Schopfer

Vice President and ICAVP Manager

DKS:spr Enc.'osures Copies: E. Imbro (1/1) Deputy Director, ICAVP Oversight T. Concannon (1/1) Nuclear Energy Advisory Council J. Fougere (1/1) NU m/vcavp/corr/970r1112-a.doc

vstem vstem Design echanical Design rawing SS nterlock discrepar 13A. and FSAR S The suction valves Vater Storage Tai OCHS*112D and 3 P&IDS EM-104A F 13A Revision 14. According to FSAF SCHS*112E shall signal (SIS). How SIS and these value	ncy betwee Section 7.3. s to the cha nk (RWST) ICHS*112E Revision 26, R Section 7 be interlock ever, these	DR V Pot Date D Date D Date D D D D D D D D D D D D D D D D D D D	VALID Lential Operab Yes No FAXed to NU Late Published VAA, EM-11: om the Refinated valves are shown vision 25, and s 3CHS*112 a safety injeto o interlocks	sliity Issue 1: 11/15/97 2A, & EM ueling s on id EM- 2D and ection between
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The suction valves Water Storage Ta BCHS*112D and 3 P&IDs EM-104A R 13A Revision 14. According to FSAR SCHS*112E shall lignal (SIS). How SIS and these values	s to the cha nk (RWST) CHS*112E Revision 26, R Section 7 be interlock ever, these	rging pumps fri are motor oper These valves EM-112A Rev 3.1.1.5, valves ed to open on a P&IDs show no	om the Refi rated valves are shown rision 25, an s 3CHS*112 a safety inje o interlocks	ueling on nd EM- 2D and ection between
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controls for 3CHS	112D and	3CHS*112E.	Cs shows n	10
	Valid	Invalid	Review	Date
eingold, D. J.				11/4/97
ieri, Anthany A		Ē	ā	11/4/97
ichopfer, Don K		Ē	Ē	11/6/97
ingh, Anand K		ā		11/11/97
NAMES AND A TRANSPORT OF A DESCRIPTION OF A	CONCERNENCE AND INCOME.	NUCLEO PROCESSIONES AND	en al tan an anna an an an an an an an an	NANGERING K WINSTACK WIN
🔿 Yes 🔘 No	Non Discr	epant Condition	O Yes	No
eingold, D. J. Ieri, Anthony A Ichopfer, Don K Iingh, Anand K	Acceptable	Not Acceptable	Review Needed	Date
	eingold, D. J. eri, Anthony A chopfer, Don K ingh, Anand K Yes () No eingold, D. J. eri, Anthony A chopfer, Don K ingh, Anand K	Valid eingold, D. J. eri, Anthony A ingh, Anand K Yes No Non Discrete No No Non Discrete No No Non Discrete No	Valid Invalid eingold, D. J. Implementation eri, Anthany A Implementation chopfer, Don K Implementation ingh, Anand K Implementation Yes No Non Discrepant Condition eingold, D. J. Implementation eingold, D. J. Implementation eingold, D. J. Implementation eingold, D. J. Implementation eri, Anthony A Implementation chopPer, Don K Implementation eingold, D. J. Implementation eri, Anthony A Implementation chopPer, Don K Implementation Implementation Implementation Implementation Implementation eingold, D. J. Implementation eingentation Implementation eingentation Implementation eingentation Implementation eingentation Implementation <td>Valid Invalid Review Valid Invalid Needed eingold, D. J. Image: Complexity of the second secon</td>	Valid Invalid Review Valid Invalid Needed eingold, D. J. Image: Complexity of the second secon

ortheast Utilities Iillstone Unit 3	ast Utilities ICAVP ne Unit 3 Discrepancy Report		ort	DR No. DR-MP3-027		
Review Group:	System			RVALID	SALAH SALAH MANA SALAH MANA SALAH MANA	
Review Element:	System Dusign			Pertential Ones	Addition for some	
Discipline:	1 & C Design			Potential Opera	ibinty issue	
Discrepancy Type:	Calculation			No.		
System/Process:	SWP			C 110		
NRC Significance level:	4			Date FAXed to M	IU:	
				Date Publishe	nd: 11/15/97	
Discrepancy	Calculation SP-3S discrepancies.	WP-16 dat	a input & va	rious design	input	
Description:	Calculation SP-3S setpoints for switch monitoring service performed by these 1. Shutdown circul STR2A,B, when the setpoint.	WP-16, Re nes 3SWP- water head e switches ating water e service w	v.1, is perfo PS26A,B an der pressure are: pump strain vater header	rmed to dete d 3SWP*PS Safety func- her motors 38 pressure is	rmine 27A,B tions SWP- below	
	 Start standby service water pump when associated train header pressure drops to the low-low setpoint. 					
	Page 6 identifies p based on calculatio calculation has been Scenarios modeled the main service w 28psig. The results been incorporated comparison proble calcualtion is being MP3-0396. Based Range of Possible not be verified.	ressures at on 12179-P en supersed d in this new vater heade s of the calc in to the si m between addressed on this fact Activation	node 1 for (T)1092 (ref ded by calcu w calculation r at nodes 1 culation 90-0 etpoint calcu the old calcu d by the disc acceptabilit on page 11	various plant lerence 8). The lation 90-069 predict press & 2 that are 169-1116 M3 lation. Noda ulation and the repancy report y of the diagonal of the calcula	conditions his 9-1116 M3. sures in less than have not he new ort DR- ram ' ation can	
	Page 7, item A.2 s per the requirement of uncertainties suc Test Equipment En- required by the Re- titled 'Preparation of with Respect to the 1.105', are not inclu-	tates that the ts of Reg. ch as 'Calib ror', 'Instrui g. Guide ar of Category Requirem used in the	ne setpoint of Guide 1.105 pration uncer ment Installand NUSCo p I Instrument ents of NRC calculation.	alculation is However, th tainty', 'Meas tion Error', e rocedure NE t Setpoint Ca Regulatory (performed he effects suring & tc., as tc., as TM-43, blculation Guide	
	Page 10, item F, id components for the switches. A review Tech. Spec. require to be a Tech. Spec	e instrumen of the tech ements doo limit value	ch. Spec. as t setpoint ca . spec., Tec cuments did e.	one of the loculation for h. Spec. base not show this	the es, and s setpoint	
		Valid	Investig	Review	Dete	
Initiator	Hindia R	(Calid	HIVANC	Needed	11/7/07	
intrator.	Nari Anthony A		H	5	11/7/97	
VTLead	and the second se	1.00				
VT Lead:	Schooler Don K	-	H	H	11///9/	

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Page 1 of 2

Northeast Utilities Millstone Unit 3	ICA Discrepar	ICAVP Discrepancy Report		DR No. DR-MP3-027	
Date: INVALID:					
Date: RESOLUTION:					
Previously identified by NU?	🔿 Yes 🔘 No	Non Discr	epant Condition	O Yes	No
Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	Hinola, R. Nerl, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date

Northeast Utilities	IC	AVP	DR No. DR-MP3-0302		
Millstone Unit 3	Discrepa	ncy Report			
Review Group:	System	Chines interformations chines, deeper interface to a resolution of	DR VALID		
Review Element:	System Design				
Discipline:	1 & C Design		Potential Operability Issue		
Discrepancy Type:	Calculation		Yes		
System/Process:	RSS		No No		
NRC Significance level:	4		Date FAXed to NU:		
			Data Bublished: 11/15/02		
Discrepancy	Calcuation NSD	101 DCC data disas	Date Published: 11/15/97		
Description	The summer of	TUT-ROS data discre	pancies		
our più	flow recirculation conditions (espec	alculation NSP-101-F ning the Containment valves 3RSS*MOV3 cially during start-up a normal nump flows	RSS, Rev. 0 is to provide t Recirculation Pump min 8A, B for low flow and shutdown conditions)		
	and crosing once	normal pump nows a	are established.		
	There were seve	ral discrepancies ider	tified during the review of		
	the calculation. P	ollowing is a listing o	f these findings:		
	1. Per page 8 of the calculation the transmitter errors are assumed to be similar to model 1153B. Per specification no. 2472.510-662, revision 0 data sheet (page no 2-55) for 3RSS*FT38A/38B, model no. is 1154HP4RC. Hence, specifications figures for model 1154, series H dated April, 89 were reviewed. The following is a list of discrepancies between the calculation and the Rosemount manual:				
	Type of error	Calc. data	Rosemount		
			data		
	Supply voltage	0.15% of span	< 0.005% of		
	effect error		out put span/volt		
	Operating	2.5% of URL +	Max LOCA		
	influence of	0.5% of span	Temp-420°F		
	temp during		+/-(1% URL +		
	accident		1% SP) Range		
			code 4-8.		
	Operating	1.5% of LIPI	+/0.20/ 1101		
	influence	+ 1% of span	0.2% SD)		
	of accident	in opan	0.270 35)		
	radiation				
	Drift error	0.25% of URL	Post DBE + 2.5%		
	Difficitor 0.25% of ORL Post DBE ± 2.5%				
	2. The converter reference 6 page output span. Attac of span. Per Refe voltage converter this converter. Pe accuracy is ±2% of ±1% of span per a calculated accura	errors and bistable er 3-4L, the converter a chment 3 of the calcu- irence 6 page 3-9A, th in the loop. Calculati- ir page 3-10J of refer- of input span. The cal- attachment 4. Based cy verification could in	Tors appear on page 9.Per accuracy is $\pm 0.25\%$ of ilation identifies it as 0.5% here is a voltage to ion does not account for ence 6 the bistable iculation identifies it as upon these observations not be performed.		
		-, ····································	not be performed.		

Page 1 of 2

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Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report			DR No. DR-MP3-0302	
initiator: VT Lead: VT Mgr: IRC Chmn:	Hindia, R. Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid S S S	Invalid	Nreded	Date 11/6/97 11/6/97 11/7/97 11/11/97
Date: INVALID:					
C. te: RESOLUTION:	NATIONAL PROFILE A SUMP SOUTH AND ADDRESS OF A CAREFUNC				
Previously Identified by NU?	🔿 Yes 🔘 No	Non Discr	epant Condition	() Yes	No
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptabl	e Needed	Date

Northeast Utilities Millstone Unit 3	IC Discrepa	AVP ancy Rep	ort	DR No. DR	-MP3-0306
Review Group:	System	Millel III and an along a dec statu	DF	VALID	
Review Element: Discipline: Discrepancy Type: System/Process:	System Design Mechanical Design Component Data RSS		P	otential Opera O Yes No	ability Issue
and eighthcance level:	1		Da	te FAXed to N	iU:
				Date Publishe	d: 11/15/97
Discrepancy: Description:	Spec 2214.802-0 conflict w/ respective The plant compu-	044-020, drw ct to RSS pu iter data base	g 2214.802-04 mp motor spe e, PDDS, show	4-020, & P ed. vs the contr	DDS ainment
	Vendor drawing 2 However the pun Addendum 5 sho	np design for 2214.802-04- np design sp ws the pump	4-020 Revision ecification 221 motor speed	to be 1780 n C is in ag 4.802-044 to be 1200	rpm. reement. through rpm.
Initiator: VT Lead: VT Mgr: IRC Chmn:	Feingold, D. J. Neri, Anthony A Schopfer, Don K Singh, Auend K	Valid S S Valid S S Valid S Valid S Valid S Valid S Valid S Valid S Valid S Valid S Valid V	Invelid	Revk y Needed	Date 11/10/97 11/10/97 11/10/97 11/11/97
Date: INVALID:					
Date: RESOLUTION:	A CREEWARD CORRECTION OF A CREATER		NATIONAL CONTRACTOR OF CONTRACT ON T	Landon and an open of a	
Previously identified by NU?	🔿 Yes 🔘 No	Non Discre	pant Condition	O Yes	No
Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date

ICAVP Discrepancy Report

DR No. DR-MP3-0325

Review Group: System Review Element: System Design Discipline: Mechanical Design Discrepancy Type: Component Data System/Process: RSS NRC Significance level: 3

DR VALID

Potential Operability issue

No No

Date FAXed to NU:

Date Published: 11/15/97

Discrepancy: Inconsistencies with FSAR Table 6.3-1 motor operated valve closure time requirements.

Description: Item 1

FSAR Table 6.3-1 requires eight inch and smaller motor operated valves to open or close withir 10 seconds. Containment recirculation system motor operated valves 3RSS*MOV38A,B are four inch valves. Containment recirculation system components are described in FSAR Section 6.3 to be included in the emergency core cooling system.

Containment Recirculation System Design Basis Summary Document, (DBSD), 3DBS-NSS-003 Revision 0, Section 12.5.3.3, requires valves 3RSS*MOV38A,B to open or close within 60 seconds. The basis for the DBSD requirement is calculation NM-027 Revision 2. The calculation states that there is no specific stroke time basis for valves 3RSS*MOV38A,B, but for conservatism, 60 seconds is recommended from the ANSI N271-1976 guidelines identified in Regulatory Guide 1.141 for containment isolation.

Valve design specification 2282.050-676 through Revision 1 shows valves 3RSS*MOV38A,B to have a design open or close time of twenty seconds or less.

Item 2

FSAR Table 6.3-1 requires eight inch and smaller motor operated valves to open or close within 10 seconds. Containment recirculation system motor operated valves 3RSS*MOV8837A,B and 3RSS*MOV8838A,B are eight inch valves. Containment recirculation system components are described in FSAR Section 6.3 to be included in the emergency core cooling system.

Containment Recirculation System Design Basis Summary Document, (DBSD), 3DBS-NSS-003 Revision 0, Section 12.5.5.2, requires valves 3RSS*MOV8837A,B and 3RSS*MOV8838A,B to stroke within 60 seconds. The basis for the DBSD requirement is calculation NM-027 Revision 2. The calculation states that 60 seconds is the required stroke time from the ANSI N271-1976 guidelines identified in Regulatory Guide 1.141 for containment isolation. The DBSD does not infer that the 60 second stroke time includes a sequence of events such as diesel loading.

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Northeast Utilities

ICAVP Discrepancy Report

DR No. DR-MP3-0325

Valve design specification 2282.050-676 through Revision 1 shows valves 3RSS*MOV38A.B to have a design open or close time of twenty seconds or less.

Initiat VT Lev VT M IRC Chr De INVAL	or: Feingold, D. J. Id: Neri, Anthony A gr: Schopfer, Don K In: Singh, Anand K Ite: ID:		Invalid	Review Needed	Date 10/30/97 10/31/97 11/6/97 11/11/97	
Dal RESOLUTIO	le: N:		NA MALINE, ROMANDON MANY ALANA AND			-
Previously Identified by N	17 🔿 Yes 💿 No	Non Discr	epant Condition	O Yes	No No	in,
Initiato VT Lea VT Mg IRC Chm Dat SL Comment	er: (none) d: Nerl, Anthony A r: Schopfer, Don K n: Singh, Anand K e: s:	Acceptable	Not Acceptable	Review Needed	Date	

ICAVP Discrepancy Report

DR No. DR-MP3-0378

Review Group: System DR VALID Review Element: System Design Potential Operability Issue Discipline: Electrical Design Yes Discret ancy Type: Component Data 3 No System/Process: SWP NRC Significance level: 4 Date FAXed to NU: Date Published: 11/15/97 Discrepancy: Horsepower and Ampacity Discrepancies for SWP Motor **Operated Valves** Description: A. Calculation 89-094-122E3: In the thermal overload sizing section of Calculation 89-094-122E3 (Rev. 0, CCN 4) for 3SWP*MOV115A, the calculation states that the full load current of 0.60 amperes is obtained from a walkdown reading of the nameplate. A review of the nameplate data (page 25) indicates that the full load current is 0.45 amperes, not 0.60 amperes. The nameplate data should be revised to reflect the latest motor data. B. Production Maintenance Management System (PMMS): The horsepower varies between 0.13 and 0.125 for valves 3SWP*MOV24A, 3SWP*MOV24B, 3SWP*MOV24C, and 3SWP*MOV24D. In Calculation 89-094-121E3 (Rev. 0, CCN 2) the motor overload test sheet, undervoltage analysis, and thermal overload heater analysis use 0.125 horsepower but the Reliance motor curve shows 0.13 horsepower. For these same valves, the values in Production Management Maintenance System (PMMS) vary substantially, from 0.125 HP (3SWP*MOV24A) to 125 HP (3SWP*MOV24B). Since horsepowe: is not used in any formulas within the calculation. this variance has no impact. Plant Design Data System (PDDS), Specification 2282.400-568 Add. 3 (Rev. 1), Calculation SP-M3-EE-342 (Rev. 1), Calculation NL-025 (Rev. 3, CCN 8), Calculation NL-033 (Rev. 3, CCN 1), Calculation NL-038 (Rev. 2, CCN 6), Fuse List SP-EE-346 (Rev. 1), vendor Drawing 2282.400-568-46 (Rev. B), and One Line Diagram EE-1AE (Rev. 37) show 0.13 HP. These documents should be revised to reflect the actual horsepower value. C. Plant Design Data System (PDDS): 1. The full load and locked rotor current data in Plant Design Data System (PDDS) for valves 3SWP*MOV24A

Data System (PDDS) for valves 3SWP*MOV24A 3SWP*MOV24B, 3SWP*MOV24C, and 3SWP*MOV24D does not match the values shown on the One-Line Diagram EE-1AE (Rev. 37), Production Management Maintenance System (PMMS), vendor Drawing 2282.400-568-046 (Rev. B), and Specification 2282.400-568 Add. 3 (Rev. 1):

PDDS: full load current = 0.55 amps, locked rotor current = 2.6

CAVP Discrepancy Report

DR No. DR-MP3-C378

amps

EE-1AE, vendor, spec., PMMS: full load current = 0.45 amps

EE-1AE, vendor, PMMS: locked rotor current = 3.15 amps

The data shown in PDDS has not been used in calculations. PDDS should be revised to reflect the actual motor data.

2. The Specification 2362.200-164 Add. 1 (Rev. 2) and Plant Design Data System (PDDS) do not have the same values for horsepower, torque (specification only), full load current (FLC), and locked rotor current (LRC) as Calculation 89-094-121E3 (Rev. 0, CCN 2), vendor Drawing 2362.200-164-080 (Rev. B), One-Line Diagram EE-1AD (Rev. 26), and Production Management Maintenance System (PMMS) for valves 3SWP*MOV50A and 3SWP*MOV50B. The values are:

Specification - 0.66 HP, 10 ft-lbs, 2.3 amps FLC, 12 amps LRC PDDS - 0.66 HP, 2.3 amps FLC, 12 amps LRC Vendor drawing - 1 HP, 15 ft-lbs, 2.8 amps FLC, 16 amps LRC One Line - 1 HP

Calculation 89-094-121E3 used the values 1 HP, 2.8 amps FLC, and 16 amps LRC which provides the most conservative results (i.e., using lower values would not change the results of the calculations). The starting torque value of 15 ft-lbs has not been used in the calculations performed in Calculation 89-094-121E3.

The horsepower shown in the Fuse List SP-EE-346 (Rev. 1) is the same as PDDS (0.66). The AC motor evaluation checklist (CCN #1, Pages 26 and 30 of Calculation 89-094-121E3) has not been updated to reflect the 15 foot-pound starting torque which is shown on the Reliance motor curve and the vendor drawing (the checklist still shows 5 foot-pounds).

These documents should be revised to reflect the latest motor data.

3. Valves 3SWP*MOV102A, 3SWP*MOV102B, 3SWP*MOV102C, and 3SWP*MOV102D were originally procured under Specification 2362.200-164 Add. 1 (Rev. 2) but were replaced under Specification SP-ME-584 (Rev. 2). The changes in attributes (i.e., horsepower, torque, and full load and locked rotor currents) were incorporated into Calculation 89-094-122E3 (Rev. 0, CCN 4), One-Line Diagram EE-1AE (Rev. 37), and Production Management Maintenance System (PMMS), but were not incorporated into Plant Design Data System (PDDS), nor the horsepower into Fuse List SP-E-346 (Rev. 1). These documents should be revised to reflect the latest motor data.

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Northeast Utilities	IC	AVP	D	R NO. DR-	MP3-037
Millstone Unit 3	Discrepa	incy Rep	ort		
	Calculation £\$-0 (pages 12, 16, 2) change in Attach change in its var breaker settings	94-122E3 inc 0, and 24), th ment 3, altho- tious analyse and undervo	cludes PDDS in herefore it does ough it does re s (i.e., thermal itage).	n its Attachi s not reflect flect the lat overload s	ment 3 the latest est ettings,
	D. Specification	s:			
	Specification 228 current for motor 3SWP*MOV24B not match other Calculation 89-00 2282.400-568-04 rotor current is 0 greater that, the value of 0.40 am	82.4C0-568 A operated va , 3SWP*MO documents (f 94-121E3 (R 6 (Rev. B)). .40 amperes full load cum peres for loc	dd. 3 (Rev. 1) Ives 3SWP*M V24C, and 3SW Plant Design D ev. 0, CCN 2), The specifical which is less the ent which is 0.4 ked rotor curre	data for loc OV24A, WP MOV24 ata System and vendo tion value fi han, rather 45 amperes int has not l	D does (PDDS), r Drawing or locked than s. The been used
	in calculations. actual locked rot	The specifica or current.	ition should be	revised to	reflect the
	in calculations. actual locked rot	The specifica or current.	ition should be	Review	Data
initiator:	in calculations. actual locked rot	The specifica or current. Vitid	Invalid	Review Needed	Date
initiator: VT Lead:	in calculations. actual locked rot	The specifica or current. Valid	Invalid	Review Needed	Date 11/6/97
initiator: VT Lead: VT Mgr:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K	The specifica or current. Vitid S	Invalid Invalid	Review Needed	Date 11/6/97 11/6/97 11/6/97
initiator: VT Lead: VT Mgr: IRC Chmn:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K	The specifica or current. V tid S S S S	Invalid Invalid	Review Needed	Date 11/6/97 11/6/97 11/6/97 11/11/97
initiator: VT Lead: VT Mgr: IRC Chmn: Date:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K	The specifica or current. V tid S S S S	Invalid Invalid Invalid I I I I I I I I I I I I I	Review Needed	Date 11/6/97 11/6/97 11/6/97 11/1/97
initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K	The specifica or current.	Invalid Invalid Invalid Invalid Invalid Invalid	Review Needed	Date 11/6/97 11/6/97 11/6/97 11/11/97
initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K	The specifica or current.	Invalid Invalid Invalid I I I I I I I I I I I I I	Review Needed	Date 11/6/97 11/6/97 11/6/97 11/1/97
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initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU?	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K	or current.	Invalid Invalid	Review Needed	Date 11/6/97 11/6/97 11/1/97 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously identified by NU?	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K	o Non Discretable	epant Condition	Review Needed	Date 11/6/97 11/6/97 11/1/97 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously identified by NU? Initiator:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discretable	epant Condition	revised to Review Needed	Date 11/6/97 11/6/97 11/6/97 11/11/97
initiator: VT Lead: VT Mgr: IRC Chrmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lead:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K Yes Na (none) Neri, Anthony A	The specifica or current. Vilid S S S Non Discretable	epant Condition	Review Needed	Date 11/6/97 11/6/97 11/6/97 11/11/97
initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lea.3: VT Mgr:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K Yes Nk (none) Neri, Anthony A Schopfer, Don K	Non Discretable	epant Condition	Review Needed	Date 11/6/97 11/6/97 11/6/97 11/11/97
initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lead: VT Lead: VT Mgr: IRC Chmn:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K (none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discretable	epant Condition	revised to Review Needed Yes Review Needed Xeded Xedd Xedd	Date 11/6/97 11/6/97 11/6/97 11/11/97
initiator: VT Lead: VT Mgr: IRC Chrmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator: VT LeaJ: VT Mgr: IR^ Chrmn: Date:	in calculations. actual locked rot Kendall, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K (none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discretable	epant Condition	revised to Review Needed Yes Review Needed Needed Needed Needed	Date 11/6/97 11/6/97 11/6/97 11/11/97

ICAVP iscrepancy Report

DR No. DR-MP3-0428

MERICANONUM ENGINEERINA SUMMARINA SUMMA	crooropun	icy nop		CRAIN REALITY AND SHIT WARK	ACCOUNTS OF CALCUMPTON OF CALCUMPTON	
Review Group:	System		(OR VALID		
Review Element:	System Design			Potential Opera	ability Issue	
Discipline:	Calculation			Yes		
System/Proves	SWP			O No		
NRC Significance level:	3			and FAYed to b		
				Alle FAked to M	WU:	
Discrepancy	The potneint for /7) unlune co	uld opt he w	Date Publish	ed: 11/15/9/	
biscrepancy.	3SWP-29, Rev 0,	CCN#1	uid not be vi	enned in call	culation Sr	
Description:	Calculation SP-3S range for (8) valve	WP-29, Re s: 3SWP*P	v 0, CCN#1 V112A1, B1	, determines , A2, B2 &	the contro	
	3SWP*FV113A1,	B1, A2, B2;	to be betwe	en 170 and	210	
	psig. The calculation Vendor Manual Ol	M-144-003/	A as the bas	I-ME-02985 is for the set	and points.	
	E&DCR N-ME-029	85 states th	hat the (8) v	alves require	d	
	replacement of the	reon actu	ators becau	se the wrong	ones wer	
	control range for the	nuracturer.	hould be bet	ween 170 er	o5, the d 210 pei/	
	after modifications	have been	made to the	e actuators.	iu z iu psij	
	E&DCR N-ME-029	85 has bee	n stamped '	SUPERSED	ED" by	
	DCN DM3-S-1009-95 because the modifications had not yet					
	been made to the actuators. DCN DM3-S-1009-95 has also					
	00-1500-96 which	states that	(1) flow req	ulating valve	DON DINS	
	3SWP*PV113A1, was in fact modified by the valve manufacture					
	with the correct ac	tuator. DCI	N DM3-00-1	500-96 also :	states that	
	DCN DM3-S-1009-	-95 incorrec	tly supersed	ied E&DCR	N-ME-	
	02985 and therefor	re re-establ	ishes E&DC	R N-ME-029	85 as the	
	governing docume valves which have	been modi	nine the con fied with the	trol range for correct actu	ators.	
	Based upon the inf	formation re	eferenced in	this set-poin	t	
	calculation, only (1) valve, 3S	WP*PV113/	A1, has been	modified	
	and therefore only	this (1) val	ve has a cor	ntrol range of	170 - 210	
	psig. There is no referenced documentation to conclude that the					
	modifications to the	een made t	o the remain	ning (7) valve	es. If the	
	N-ME-02985 then	the control	mave not be	en made per	the	
	determined for the	remaining	(7) valves.			
				Review		
	Director D. J.	Valid	Invalid	Needed	Date	
Initiator:	Dionne, B. J.	\boxtimes			10/31/97	
VT Lead:	Nen, Anthony A				11/1/97	
VT Mgr:	Schoprer, Don K				11/6/97	
Date:	angn, Anana K		11		11/11/97	
INVALID:						
Date:	Andrew was a construction of a second state	undrivation as reconstructives are an examination		diservati anno avec arterizato per		
RESOLUTION:						

Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report			DR No. DR-MP3-0420		
Previously identified by Nor Initiator: VT Lead: VT Mgr: IRC Chimn: Date: SL Comments:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K		Not Acceptable	Review Needed	Date	

Northeast Utilities Millstone Unit 3	ICA Discrepar	VP ncy Repo	ort D	R No. DR-	MP3-0436
Review Group: Review Element: Discipline: Discrepancy Type: System/Process: NRC Significance level:	System System Design Mechanical Design Component Data RSS 4		DR Pol	VALID Lential Operation Yes No FAXed to NL	vility issue J:
Discrepancy:	Inconsistency betw line number identi	ween PDDS fication.	8 P&ID EM-1	ate Published	a: 11/15/97 spect to
Description:	Line number 3-QS 112C Revision 16 PDDS.	S-014-026- but not in th	2 appears on f he plant compu	P&ID 12179 Iter data ba	-EM- ise,
Initiator: VT Lead: VT Mgr: IRC Chmh: Date: INVALID:	Feingold, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid ISI ISI ISI	Invalid	Review Needed	Date 11/10/97 11/10/97 11/10/97 11/11/97
Date: RESOLUTION:					
Previously Identified by NU? Initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date

ICAVP Discrepancy Report

DR No. DR-MP3-0446

Review Group: System DR VALID Review Element: System Design Potential Operability Issue Discipline: Mechanical Design Yes **Discrepancy Type:** Calculation No System/Process: SWP NRC Significance level: 3 Date FAXed to NU: Date Published: 11/15/97 Discrepancy: Calculations using the HY-066 Model have not addressed physical changes in the SWS Description: Calculations 12179-935P(T), Rev 0, CCN#2; 12179-936P(T), Rev 0: 12179-956P(T), Rev 0 were all developed sarly in 1984 using the HY-066 hydraulic model to predict temperatures and pressures at several locations in the service water system. Since that time, numerous changes have been made to the service water system piping and components, i.e., replacing elbows and heat exchangers. The impact of these changes with respect to the model predictions have not been addressed by these calculations. Also, many of the references have been revised and/or superseded since the original issue of these calculations. The roughness factor, epsilon, was dutermined for commercial steel pipe and used as a design input for all (3) of these calculations. A large portion of the piping in the service water system is Ni/Cu clad, therefore, the roughness factor will not be the same as that for commercial steel pipe. A more representative value should have been used, or a justification must be made for using the roughness factor of commercial steel pipe throughout the models. The K values for the individual lines were determined in pages 20-27 of calculation 12179-935P(T) and pages 15-23 of calculation 12179-956P(T). Calculation 12179-936P(T) uses the same information as calculation 12179-935P(T). Determination of the K values used, other than those made explicit in the calculations, need further clarification, i.e., for elbows, valves and tees. Typically, K is calculated as : K=f*(L/D). Although a K value is referenced from Crane 410, it needs to go further and specify the equation used to determine K and the values used for both f and (L/D) because there are several types of elbows. valves and tees evaluated by Crane 410. For example: Price 20 of calculation 12179-935P(T) lists 0.132 as the K value for a 90 deg bend. Using K=f*(L/D) and inserting L/D = 30 for a standard elbow and f = 0.011 for a fully turbulent 30 inch pipe. 0.33 would be the K value. Several K values listed for piping components could not be verified because not enough information was given on how they were determined. Review

		A 9819CI	IUA9HG	Needed	Date
Initiator:	Dionne, B. J.				11/6/97
VT Lead:	Neri, Anthony A			Ē	11/6/97
VT Mgr:	Schopfer, Don K		ā		11/7/97
IRC Chmn:	Singh, Anand K				11/11/97

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Page 1 of 2

ICAVP **Discrepancy Report**

DR No. DR-MP3-0446

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🔿 Yes 🔘 No	Non Discr	epant Condition	O Yes	No No
(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date
	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Yes No Non Discr (none) Acceptable Neri, Anthony A Schopfer, Don K Singh, Anand K	Yes No Non Discrepant Condition Yes No Non Discrepant Condition (none) Acceptable Not Acceptable Neri, Anthony A Image: Condition and the second	Yes No Non Discrepant Condition Yes Acceptable Not Acceptable Review (none) Acceptable Not Acceptable Needed Neri, Anthony A Image: Condition Yes Schopfer, Don K Image: Condition Yes Singh, Anand K Image: Condition Yes

Millstone Unit 3	Discrena				
	Disciepo	ncy Rep	ort		
Review Group	: System	ADRO BRANCO A ACTO ACT	NAMPORTON STREET, STREET, ST	DR VALID	NAMES OF BRIDE STREET,
Review Element	: System Design			Potential Oner	ability leave
Discipline	: Mechanical Design			Potential Open	admity tasue
Discrepancy Type	: Calculation			No	
System/Process	: SWP				
NRC Significance level	: 3			Date FAXed to I	NU:
				Date Publish	ed: 11/15/97
Discrepancy	Calculations usir physical changes	g the HY-06 in the SWS	6 Model ha	ve not addres	ised
Description	Calculations 121 Rev 0; 12179-95 using the HY-060 pressures at sev Since that time, service water sys elbows and heat respect to the mo these calculation revised and/or su calculations.	79-935P(T), 6P(T), Rev is hydraulic n eral location numerous ch atem piping a exchangers odel predictions. Also, ma aperseded si	Rev 0, CCI 0 were all de nodel to pre- s in the serv- nanges have and comport. The impac- ons have no ny of the ref nce the orig	V#2; 12179-9 eveloped earl dict temperat vice water sys been made ents, i.e., rep at of these chi t been address ferences have ninal issue of	36P(T), y in 1984 ures and tem. to the lacing anges with ssed by e been these
	steel pipe and us calculations. A la system is Ni/Cu of the same as that representative var must be made fo pipe throughout t	ed as a desi arge portion blad, therefo for commer flue should h r using the r he models.	n, was deter gn input for of the piping re, the roug cial steel pip nave been u oughness fa	all (3) of (all (3) of (a) in the servic hness factor v be. A more sed, or a just ictor of comm	nmercial e water will not be ification hercial steel
	The K values for 20-27 of calculati calculation, 12176 same information of the K values u calculations, need and tees. Typica K value is referent specify the equat both f and (L/D) to valves and tees of 20 of calculation 90 deg bend. Us standard elbow a 0.33 would be the components could information was g	the individu on 12179-93 9-956P(T). (as calculati sed, other the d further clain lly, K is calculated ion used to calculate waluated by 12179-935P ing K=f*(L/D and f = 0.011 b K value. S d not be ven viven on how	al lines were 35P(T) and p Calculation ion 12179-9 an those main infication, i.e ulated as : I rane 410, it determine K re are seven Crone 410. (T) lists 0.13) and insertific for a fully to everal K va ified becaus y they were	e determined pages 15-23 (12179-936P(1 35P(T). Dete ade explicit in t, for elbows, (=f*(L/D). Al needs to go fi and the valu al types of elt For example 32 as the K values ing L/D = 30 fi urbulent 30 in lues listed for e not enough determined.	in pages of) uses the rmination in the valves though a urther and es used for xows, e: Page alue for a for a ch pipe, r piping
				Review	
Initiation	Diagone P i	Valid	Invalid	Needed	Date
WT Lond	Nari Anthony A				11/6/97
VT LOOG	Schooler Dec K				11/6/97
VT tagr:	Schopler, Don K				11///97

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Northeast Utilities Millstone Unit 3	ICAVP DR Discrepancy Report			R No. DR-	MP3-0446
Date: INVA. (D:	stan ananan di sentan ang Afrikanan				
Date: RESOLUTION:					
Previously identified by NU?	Ves 🔍 No	Non Discr	epant Condition	O Yes	No No
Initiator: VT Lead: VT Mgr: IRC Chran: Date:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Raview Needed	Date

SL Comments:

Jortheast Utilities	ICA	VP		DR No. DR	-MP3-0449
Ailistone Unit 3	Discrepan	cy Rep	ort		
Review Group:	System		E	RVALID	
Review Element:	System Design			Potential Opera	bility issue
Discipline:	Mechanical Design			O Yes	tonity table
Discrepancy Type:	Celculation			No No	
System/Process:	SWP				
NPC Significance level:				ate FAXed to N	IU:
		<u> (17. 17. 17. 17. 17. 17. 17. 17. 17. 17. </u>		Date Publishe	rd: 11/15/97
Discrepancy	Calculation 92-080	-1014ES II	ncorrectly Ap	oplied Hydrau	ulic Data
Description	The purpose of Ca rate changes in the as a result of modi DCN DM3-S-0050	Iculation 92 e 3HVQ^AC ifications m -93.	2-080-1014E CUS1E and 3 ade by DCN	S was to evo SCCI*E1B pig DM3-S-034	aluate flow bing lines -93 and
	The approach take before and after the rates. Table 1, pa components in the modifications. The the values of K, with the way through the compared to chang probably not interest	en was to en le modificat ge 7, identi 3HVQ*AC e values lis here K = f*(le calculatio ges in L/D, ded.	valuate the f tions to pred fies the L/D US1B line be ted in the L/I (L/D). This e on such that which are no	orm loss coe ict changes i for all of the efore and aft D column are error is propo changes in K ot meaningfu	fficient, K, n the flow er the e actually gated all (are being I and
	The 'Alternate Che assumes the inforr correct and uses it verifying it. The cl the 3HVQ*ACUS1 K is determined by referenced delta L again by f invalida propagated throug	ck Calcula mation in Tr in the alter hange in the B branch is multiplying /D value wa tes the resu h to the fina	tion' (include able 1 of the mate check of calculated of calculated of f times dell as actually du lits of the ca al result.	original calc original calc calculation w coefficient, do on page A2. ta L/D. Since elta K, multip iculation as t	nent A) sulation is ithout etta K, for Here delta e the olying it his error is
	The percent L/D red determined to be 0 the percent L/D red approximately 5% branch would have that percent L/D re L/D reduction for the between the two be	eduction for 0.09%. Had duction for and the pe e remained eduction for he CCI bran ranches is r	the HVQ bri this analysi the HVQ bra rcent L/D rec as 4%. The the HVQ is nch is income minor (5% vs	anch was inc s been done nch would hi duction for th refore, the co less than the ect. The diffe s. 4%).	orrectly correctly, ave been e CCI onclusion percent arence
				Review	
Initiation	Dione a B	/alid	Invelid	Needed	Date
VT Load	Nari, Anthony A		H		11/4/07
VT Mor	Schopfer, Don K	R		H	11/10/07
IRC Chmn	Singh, Anand K		H	H	11/11/97
Data				line and the second second	
INVALID:					
			en anti interestati de como	IN A REPORT OF A DECK	
Date:					

Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report			DR No. DR-MP3-0449		
Previously Identified by NU?	VYes Vo	Non Discr	epant Condition	U Yes	· No	
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand I'	Acceptable	Not Acceptable	Review Needed	Date	

Nortneast Utilities	IC	AVP	[R No. DR	MP3-0456
Aillstone Unit 3	Discrepa	ncy Rep	ort		
Reviev roup:	System	INCOME AS A CALIFORNIA CONTRACTOR	DR	VALID	
Review Element:	System Design		D.	dential Opera	Nility Leave
Discipline:	Mechanical Design			Ver Ver	Dinty issue
Discrepancy Type:	Licensing Document			No No	
System/Process:	RSS				
NRC Significance level:	3		Da	te FAXed to N	U:
				Date Publishe	d: 11/15/97
Discrepancy:	Calculation US(B	3)-322			
	the maximum an spray system (RS (LOCA). The cal (SWEC proprieta the water on the or water, following a for the qualification piping. One discrepancy The initial contain the hot and cold of Attachment 2, pa temperature of 8 values in Calcula	d minimum t SS) in the ev culation uses iny) to determ containment a postulated on of the RS was identifient ment tempe cases is 120 ge 1). This OF and dew ition US(B)-2	emperatures f ent of a Loss s the LOCTIC nine the extrem floor and of th LOCA. The re S cooler disch ed in Calculati erature and de F (Attachment differs from th point of 55F, 53, Rev. 4, page	or the recir of Coolant / computer p ne tempera recircula esults are to arge valve: on US(B)-3 w point use 1, page 1 e initial con identified as age 18 (US)	culation Accident program itures of tion spray be used s and RSS 22. d for both and tainment s minimum (B)-322
	The lower initial of be evaluated for of the water on the spray water, follo	containment their impact ne containme wing a postu	temperature a on the cold ex ent floor and o ilated LOCA.	and dew point dreme terns f the recircu	nt should peratures llation
		Valid	Invalid	Needed	Date
initiator:	Wakeland, J. F.				10/30/97
VT Lead:	Neri, Anthony A				10/31/97
VT Mgr:	Schopfer, Don K	8	ā	ō	11/6/97
IRC Chmn:	Singh, Anand K				11/11/97
Date:	10/16/97				
INVALID:	Torroror				
ing the second secon			terne anna de la calacitad de la constante da	GALER DATA AND THE REAL PLANE OF MERICA	
Date:					
RESOLUTION:					
Previoully Identified by NU?	🔾 Yes 🗶 No	Non Discr	epant Condition	O Yes	No No
			Not Associate	Review	Deres
Initiator:	(name)	eplable	Not Acceptable	Needed	Date
VT Lead:	Neri, Anthony A			M	
VT Mgr:	Schopfer, Don K				
IRC Chmn:	Singh, Anand K		H		
Date:					
et e					
St. Comments:					
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ICAVP Discrepancy Report

DR No. DR-MP3-0464

Review Group:	System			DR VALID		
Review Element:	System Design			Potential Opera	bility Issue	
Discipline:	Mechanical Design			O Yes		
Discrepancy Type: System/Process:	Calculation QSS			No No		
NRC Significance level:	3			Date FAXed to M	<i>I</i> U:	
				Date Publishe	nd: 11/15/97	
Discrepancy:	Spray Area Calcu	lation ES-22	29			
Description:	Calculation ES-22 for each QSS and pressure and at a	29 (Rev. 1: I RSS spray n elevated o	CCN 1) dete header at s containment	ermines the s tandard conti pressure.	pray area ainment	
	1. Page 12 of the friction factor is the and other particul SWEC Safeguard was requested by indicated that Cal System. The con consistent with the a final conclusion not available.	e calculation le effectiven ates in contr is Generic C RFI MP3-2 culation PE- clusions of t e purpose, n cannot be d	n introduces ainment. The Calculation F 78. Respon 125 could n the calculation the calculation the calculation the calculation the calculation the calculation the calculation	a friction fac pray due to s his factor com PE-125. This se M3-IRF-00 to be found in on appear to and inputs. Calculation P	tor. The team, air nes from calculation 0222 n the NU be However, 2E-125 is	
	configurations as circular. The SPRACO charts show that the spray pattern is circular for nozzles pointed straight down. For nozzle configurations pointed 45°, 60° and 75° up from horizontal, the spray pattern is elliptical with the width greater than the length of the spray. The length is in the spray direction. The width is perpendicular to the spray direction. For all other nozzle configurations, the spray pattern elliptical with the length direction with the width of the spray pattern elliptical with the length of the spray pattern elliptical with the length direction.					
	The calculation of horizontally, 22.5° by the elliptical sp spray for the circle located on each h this is not a conce	the spray a down, 45° ray pattem. e diameter. eader provid m.	rea for nozz down and 6 The calcul The nozzle de overlappi	tes pointed 2 7.5° down is the ation uses the configuration ing sprays. T	2.5° up, unaffected e length of is as 'herefore,	
	However, the calc overestimated. The and width of spray the spray diamete	ulated spray he calculation for the circ r which affe	y area for no on uses the le diameter. cts the cove	ozzles pointed average of th This overes erage area.	d 45° up is e length timates	
		Wallet	Investig	Review	Date	
Initiatory	Langel D	Vano	11VAND	Needed	Late	
Initiator:	Neri Anthony A				11/3/21/	
VILOAC	Nen, Anthony A		L_		11/3/97	
	The second	1			11/02/037	
VT Mgr:	Schopler, Don K	6		hand	11/0/97	

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Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report		ort	DR No. DR-MP3-0464	
Date: RESOLUTION:					
Previously identified by NU?	🔿 Yes 🖲 No	Non Discrepant Condition		O Yer	No
Initiator: VT /Lead: VT Mgr: IRC Chmn: Date: SL Comments:	(none) Neri, Anthony A Schopfer, Don K Singh, Anar.1 K	Acceptable	Not Acceptabl	Review Nraded	Date

ortheast Utilities	ICA	VP	D	R No. DR-	MP3-0475
illstone Unit 3	Discrepar	icy Rep	ort		
Review Group:	System	A STREET, DOG STREET, SUID RUNA	DR	VALID	NEXTRA ADDR.
Review Element:	System Design		Pol	ential Operat	ulity lesue
Discipline:	Mechanical Design			O Yes	
Discrepancy Type:	Component Data			No No	
NRC Significance level:	4		Date	EAXed to MI	
			- Call	ate Bublisher	4. 11/15/07
Discrepancy		Adeober Do	sian		
Description:	During the rr view Release System () discrepancy regan	of Supplem SLCRS) filte ding the fac	entary Leak Co er units 3HVR* e velocity and	ollection an FLT3A/B a residence t	d ime was
	FSAR Section 6.2 gasketless nontray residence time period 47 fpm. The actual FSAR Table 1.8-1 exception states th the carbon adsorb charcoal bed. Test face velocity of 46 FSAR Table 1.8-1 exception states th 4 inch bed and oper residence time) Specification 2170 Construction section area such that the that a 2 in. nominal minimum residence nominal 4 in. thick	3 states that y type and is 2 inches d I bed depth Regulatory hat the dwel er unit is 0.3 ting of the c fpm. Regulatory hat the active erating face 0.430-065 C on requires face veloci il adsorbent e time of 0. ness.	at the charcoal s designed for epth for gases of the adsorbe Guide 1.52, R I time for the m 21 sec. All filten harcoal is base Guide 1.52, R ated carbon ac velocity of 47 harcoal Adsorb the filter to hav ty is no greater bed thickness 25 sec. The be	adsorber is a 0.21 seco at a flow ve er is 4 inche ev. 2 positi inimum 2 i rs use a 4-ii ed on a max ev. 2 positi dsorber sec fpm (0.43 s per Cells De ve a net effe than 40 fp will provide ed depth shi	a a and elocity of s. on C.3.i inches of rich thick kimum on C.6.a tion has a sec esign and ective m and e a all be a
	nominal 4 m. mor	1033.		Review	
		Valid	Invalid	Needed	Date
Initiator:	Stout, M. D.				10/16/97
VT Lead:	Schooler Doo K		H	Ц	11/6/07
IRC Chron:	Singh, Anand K		H		11/11/97
Date:			kaal	<u> </u>	
INVALID:					
Date: RESOLUTIO***			999 92 99 99 99 99 99 99 99 99 99 99 99		NEX MANAGER CONTAINS
Previously identified by NU?	🔿 Yes 🔘 No	Non Discre	pant Condition	O Yes	No
initiator: VT Lead: VT Mgr:	(none) Neri, Anthony A Schopfer, Don K	Acceptable	Not Acceptable	Review Needed	Date

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No theast Utilities Millstone Unit 3	ICAVP Discrepancy Report			DR No. DR-MP3-0478	
IRC Shrin:	Singh, Anand K	D			
Date:		-		ш.	
SL Comments:					

ortheast Utilities	ICA	VP	DR	No. DR-N	1P3-0523
Ilstone Unit 3	Discrepan	cy Repo	ort		
Review Group:	System		DR V	ALID	and share and share and share
Review Element:	System Design		Pole	Intial Operabi	lity lesue
Discipline:	& C Design) Yes	,
Discrepancy Type:	Calculation			No No	
System/Process:	QSS				
NRC Significance level:	4		Date	FAXed to NU:	
			De	ite Published:	11/15/97
Discrepancy:	Instrument error va level setpoint	alue discrep	ancy for the cr	npty (low-lo	w-low)
Description:	I&C calculation 344 Interlock Channel of uncertainty and set instrumentation. Set the RWST tank to empty level signal annunciated in the Per FSAR figure 6 instrument error of inches. Calculation supresso: for QSS process setpoint st Calculation 3451B setpoint value. Per error - identified as and -13.8 inwc. Plo seven decimal acc for convenience.	51B01-1232 Calibration" tpoints for k witches 3QS provide em QSS pump control roo 3-5 these s ± 12 inches hYD-H39 Tank QSS hould be 28 03-1232E3 r page 2 of 1 s total loop ease note th curacy. The	2, Rev. 00, title calculates inst ow-low and em SS*LS56A/B/C/ pty level signal s are tripped al m. witches have a s tor the empty Rev. 1 titled "D "TK1" determining inches. is using 28 inclution uncertainty (TL hat the calculation write-up here is	d "RWST I rument cha pty level /D are prov is. Upon de nd the cond in associate level setpo besign of Vo ned the em the instrum U) - is +12. ion is done s using one	Level innel ided on tection of lition is ed pint of 40 prtex pty level inal nent 7 inwc for decimal
	The error of -13.8 5. Additionally,the not support the lev	inwc does n setpoint ca rel requirem	ot agree with ti culated in 345 ents of calcula	he FSAR fig 1803-1232E tion . 1YD-H	gure 6.3- E3 does 139.
		Malla	Invalid	Review	Date
	Martin D	Valid	Invalid	raeaded	11/0/07
Initiator:	HINDIA, R.			H	11/8/8/
VT Lead:	Neri, Anthony A				11/0/9/
VT Mgr:	Schopfer, Don K				11/10/97
ING Chinh:	Singh, Anand K				11/11/07
Date:					
INVALID:				NAMES - CONTRACT OF THE OWNER	and the second
Date:					
RESOLUTION:					
Previously Identified by NU?	🔾 Yes 🜒 No	Non Discr	epant Condition	O Yes	No No
Initiator: VT Lead:	(none) Neri, Anthony A		Not Acceptable	Review Needed	Date
VT Mgr:	Schopfer, Don K	F	E .	M	
IRC Chmn:	Singh, Anand K	H		M	

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ICAVP Discrepancy Report

DR No. DR-MP3-0523

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SL Comments:

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ICAVP DR No. DR-1/1P3-0528 Northeast Utilities **Millstone Unit 3 Discrepancy Report Review Group: System** DR VALID **Review Element: System Design** Potential OperaLil#y Issue Discipline: Mechanical Design Yes **Discrepancy Type: Calculation** No System/Process: RSS NRC Significance level: 4 Date FAXed to NU: Date Published: 11/15/97 Discrepancy: Calculation US(B)-303 Description: The purpose of Calculation US(B)-303, Rev. 0 is to estimate the sump water approach velocities at the fine mesh screens, after a design basis accident (DBA), for various scenarios. The sump water approach velocities are calculated for the case when the fine mesh screens are completely covered by water and when the screens are partially covered by water (net wetted screen area), based on the minimum amount of water on the containment floor following a DEA. The time at which the minimum water in the sump occurs is 330 seconds per Calculation US(B)-278, Rev. 0 (US(B)-303 Reference 6). The 330 second time for minimum depth is based on RSS pump start 240 seconds after receipt of CDA signal. The following discrepancy was identified in Calculation US(B)-303: According to LSK-24-9.4A Rev. 9, RSS pumps A and B start 650 seconds after receipt of CDA signal (and EDG connect to essential bus). RSS pumps C and D start 660 seconds after receipt of CDA signal (and EDG connect to essential bus). The approach velocity at the sump screens is calculated in US(B)-326, Rev. 1, based on an RSS pump start time of approx. 11 minutes after CDA. This calculation also includes the effects of spray holdup and time delay, and insulation debris. US(B)-326 does not, however, calculate the sump screen area. Therefore, Calculation US(B)-326 should be revised to include the sump screen area calculations currently in US(B)-703, and Calculation US(B)-303 should be voided. Review Valid Invalid Date Needed Initiator: Wakeland, J. F. 11/2/97 \boxtimes VT Lead: Neri, Anthony A 11/4/97 VT Mgr: Schopfer, Don K \boxtimes 11/10/37 IRC Chrnn: Singh, Anand K \square 11/11/2 * Date: INVALID: Date: **RESOLUTION:** Previously Identified by NU? O Yes No Non Discrepant Condition O Yes No Printed 11/12/97 1:22:24 PM Page 1 of 2

DR No. DR-MP3-0528 ICAVP Northeast Utilities **Discrepancy Report Millstone Unit 3** Review Needed Acceptable Not Acceptable Date Initiator: (none) VT Lead: Neri, Anthony A VT Mgr: Schopfer, Don K IRC Chron: Singh, Anand K Date: SL Comments:

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Northeast Utilities	ICAVP	DR No. DR-MP3-0542
Millstone Unit 3	Discrepancy Report	and the second second
Review Group:	System	DR VALID
Review Element:	System Design	Potential Operability Issue
Discipline:	Electrical Design	O Yes
Discrepancy Type:	Calculation	No No
System/Process:	DGX	
NHC Significance level:	•	Date FAXed to NU:
		Date Published: 11/15/97
Discrepancy:	Second Level Undervoltage Relay S	etpoint (Calculation NL-042)
Description	Calculation NL-042 determines the s undervoltage relays. The function of degraded voltage condition in which safety related electrical loads is less contiunous operation. If the degrader for too long a period, the emergency started and the safety related loads of generator. The operator is warned by generators are started to allow the op degraded voltage condition.	these relays is to detect a the voltage applied to the than the minimum rating for d voltage condition persists diesel generators are operated from the diesel efore the emergency diesel perator to correct the
	On page 7, the ratic error and burde random errors. However, the voltage fixed and is actually a bias except fo uncertainty. Generally, the burden of fixed. This allows the ratio error to be bounds than the accuracy classificat reducing the instrumentation tolerand conservative in this regard.	n error are treated as non- e transformer turns ratio is or the measurement in the voltage transformers is e determined within narrower ion. These effects allow ce. Calculation NL-042 is
	On page 9, the calibration tolerance voltage relays is given as 0.05% whi calibration tolerance is substituted in value of 0.05% is not consistent with Attachment 2, which can be as high 108 volts). (See the report for the tes 1987 on page 11 of Attachment 2.)	for the pick up of the en the value for the relay ito equation 6. However, the the "as left" values given in as 108.28 volts, (100.26% of st performed on May 17,
	The discussion on page 10 only add the timer relays and the accuracy of the setting of the timer relays. Other inaccuracy such as power supply va (for the non-Agastat relays), etc. are be addressed by the calculation. If s negligible, an explanation should be	ressed the repeatability of the equipment used to verify common sources of riations, temperature effects not discussed. They should orne or all of these are provided.
	The calculation ignores temperature relay based on a relatively small nor the relay location (10°F). However, t needs to address the temperature di location where the relay is calibrated location as well as the temperature r above the room ambient temperature is based on the normal temperature	effects on the undervoltage mal temperature range at the temperature effect also fference between the d and the normal relay hise in the relay cubicle re. The justification on page 7 variation in the instrument

Northeast Utilities	ICA	VP	D	R No. DR-N	AP3-0542
Millstone Unit 3	Discrepancy Report				
	rack room. If the p an abnormal temp equipment serving well. The implicit a is a simple function variation from 85° reduction of the te value. This implicit based on testing of	ue to operate lure of the H sust be consi- ne temperate , that is redu- se a proport 5% to a mus- cplicitly verif	operate under of the HVAC reconsidered as mperature effect t is reducing the proportionate o a much lower tly verified		
	Page 7 of the body of the calculation states that the drift error is taken to be ±0.5%. Page 5 of Attachment 2 states that this value has been adjusted to an 18 month interval. However, the data shows a drift at Bus 34D of ±0.5 to ±0.6% over the interval of February 15, 1991 to September 11, 1991. Similar drift values are seen in the pick up values during this period. The drift at Bus D was -0.5 to -0.7% over the interval between October 6, 1992 through September 3, 1993. Based on this data the value of drift used in the calculation , ±0.5% seems too low unless the calibration interval is shortened. The calculation makes the assumption that drift of the Agastat time delay relays can be neglected. However, relay 62H shows drift of about 1% of setting between calibration checks that are conducted annually. This 1% error is comparable to some of the other uncertainties that are considered. The 62T relay shows lower drift. Calibration drift should not be neglected, at least for				
		Valid	Invalid	Review	Date
Initiator	Bloethe, G. William	53			11/10/97
VT Lead:	Neri, Anthony A		ö	ō	11/10/97
VT Mor:	Schopfer, Don K		H	ň	11/10/97
IRC Chmn:	Singh, Anand K		ă	ă	11/11/97
Date:					
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VT Mgr:	Schopfer, Don K	H			
IRC Chmn:	Singh, Anand K		-	36	
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SL CONTINENTS:					

orthess.	tilities	IC.	AVP	1 I	DN. DR-	MP3-0552	
出动动物 1.	13	Discrepa	ncy Repo	ort			
S. Section A. L.	Review Group:	Configuration			DR VALID		
	Review Element:	lement: System installation			- otential Operability Issue		
Discipli		Electrical Design					
	Discrepancy Type:	installation Implementa	tion		D No		
	Systom/Process:	RSS			a standard a		
NRC Significance level:		t (1997) - 1997		D	ate FAXed to NI	U:	
					Date Publishe	d: 11/15/97	
	Discrepancy:	Installation not in	accordance	with drawing	5		
	Description:	1. The conduit in Conduit Support latest version of change documen 34MB Rev. 5. C on the CSL. An a on Shelf (1).	stalled on Co Log SB-130 f the support do the relating to onduits G, L, additional Cor	nduit Suppor Rev. 3) is no rawing nor a drawings EE and K are no nduit 3CX300	rt SB-130 (Ri t as shown o ddressed by E-34MA Rev. ot installed a DPB - 4" flex	ef. n the any open 5 and EE- s shown is located	
		2. Conduit 3CX3 Support SB-028. Cable and Racey open change doo	07NC is listed Field walkdo way Program sument for dra	d as 2" in F-E own found co (TSO2) indic owing EE-34	E-23681 for C onduit to be 3 cates conduit MA Rev. 5 a	Conduit ". The is 2". No ddresses	
		this discrepancy	tor Support i	00-007.			
		3. Page 22 of 24 Supports S104A- Rev. 5) due to th installed per field discuss its deletion	of F-E-32362 038 and S10 e addition of I walkdown ar on.	2 was to add 8B-046 (Ref conduit by th nd no open c	"Z" bracing t drawing EE his F-E. No t hange docur	between -59MA praces are ments	
		3. Page 22 of 24 Supports S104A- Rev. 5) due to th installed per field discuss its deletion	of F-E-32362 038 and S10 e addition of I walkdown ar on.	2 was to add 8B-046 (Ref conduit by th nd no open c	"Z" bracing t drawing EE his F-E. No t thange docur Review	oetween -59MA praces are nents	
	Initiator	3. Page 22 of 24 Supports S104A- Rev. 5) due to th installed per field discuss its deletion	of F-E-32362 038 and S10 e addition of I walkdown ar on. Valid	2 was to add 8B-046 (Ref conduit by th nd no open c	"Z" bracing t drawing EE his F-E. No t hange docur Review Needed	between -59MA braces are nents Date 11/7/97	
	Initiator:	3. Page 22 of 24 Supports S104A- Rev. 5) due to th installed per field discuss its deletion Sarver, T. L.	of F-E-32362 038 and S10 e addition of I walkdown ar on. Valid	2 was to add 8B-046 (Ref conduit by th nd no open o	"Z" bracing t drawing EE his F-E. No t hange docur Review Needed	Detween -59MA praces are nents Date 11/7/97 11/7/97	
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Previous	Initiator: VT Leed: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: y Identified by NU?	3. Page 22 of 24 Supports S104A- Rev. 5) due to th installed per field discuss its deletion Sarver, T. L. Neri, Anthony A Schopfer, Don K Singh, Anand K	of F-E-32362 038 and S10 e addition of I walkdown ar on. Valid	2 was to add 8B-046 (Ref conduit by th nd no open c invalid	"Z" bracing t drawing EE his F-E. No t thange docur Review Needed	Detween -59MA praces are nents Date 11/7/97 11/10/97 11/11/97 11/11/97 0 No Date	
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Previous	Initiator: VT Leed: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: y Identified by NU? Initiator: VT Leed: VT Mgr: IRC Chmp:	3. Page 22 of 24 Supports S104A- Rev. 5) due to th installed per field discuss its deletion Sarver, T. L. Neri, Anthony A Schopfer, Don K Singh, Anand K (none) Neri, Anthony A Schopfer, Don K Singh, Anand K	of F-E-32362 038 and S10 e addition of I walkdown an on. Valid S S S O Non Discret Acceptable	2 was to add 8B-046 (Ref conduit by th nd no open c invalid	"Z" bracing t drawing EE his F-E. No t hange docur Review Needed	Detween -59MA praces are nents Date 11/7/97 11/10/97 11/11/97 11/11/97 No Date	
Previous	Initiator: VT Leed: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: y Identified by NU? Initiator: VT Lead: VT Mgr: IRC Chmn:	3. Page 22 of 24 Supports S104A- Rev. 5) due to th installed per field discuss its deletion Sarver, T. L. Neri, Anthony A Schopfer, Don K Singh, Anand K (none) Neri, Anthony A Schopfer, Don K Singh, Anand K	of F-E-32362 038 and S10 e addition of I walkdown an On. Valid	2 was to add 8B-046 (Ref conduit by th nd no open o invalid	"Z" bracing t drawing EE his F-E. No t hange docur Review Needed	Detween -59MA praces are nents Date 11/7/97 11/10/97 11/11/97 11/11/97 No Date	
Previousi	Initiator: VT Leed: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: y Identified by NU? Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	3. Page 22 of 24 Supports S104A- Rev. 5) due to th installed per field discuss its deletion Sarver, T. L. Neri, Anthony A Schopfer, Don K Singh, Anand K (none) Neri, Anthony A Schopfer, Don K Singh, Anand K	of F-E-32362 038 and S10 e addition of I walkdown an On. Valid	2 was to add 8B-046 (Ref conduit by th nd no open c invalid	"Z" bracing t drawing EE his F-E. No t thange docur Review Needed	Detween -59MA praces are nents Date 11/7/97 11/10/97 11/11/97 11/11/97 00 No Date	

ortheast Utilities	ICAVP	10	DR No. DR	MP3-0571	
Aillstone Unit 3	Discrepancy I	Report		يذالك ببنية	
Review Group:	System		DR VALID		
Review Element:	System Design		Potential Opera	bility Issue	
Discipline:	Mechanical Design		O Yes		
Discrepancy Type:	Calculation		No No		
System/Process:	RSS				
NRC Significance level:	4		Date FAXed to N	U:	
			Date Publishe	d: 11/15/97	
Discrepancy:	Calculation US(B)-1187				
Description:	The purpose of calculation US(B)-1187, Rev. 1 is to determine RSS operating pressures and temperatures for RSS stress data package SDP-RSS-01361M3, Rev. 4 which are to be used in the piping stress analysis.				
	Four discrepancies were identified in US(B)-1187:				
	1. The elevation of the RSS pump discharge is incorrectly used. Pump discharge pressure is conservatively calculated as occurring at the pump impeller elevation of -47'-4", which is internal to the pump. This resulting discharge pressure is used to RSS HX outlet, and RSS spray header pressures as if it occurred at the minimum elevation of the pump discharge line, -23'-3". This error overestimates head by 24'-1" (9.8 to 10.4 psi) for all modes of operation.				
	 A nominal water density of 62.34 lbm/ft3 is used to compute system pressures, rather than the actual densities of 62.426 lbm/ft3 at 40F, 61.74 lbm/ft3 at 118F, and 58.60 lbm/ft3 at 257F. This results in overestimates of pressure of up to 11.6 and underestimates of pressure of as much as 0.3 psi. 				
	3. The reference given for RSS pump impeller elevation of -47'- 4" is Calc. US(B)-326. Calc. US(B)-326, Rev. 1 does not, however, reference a pump drawing. It references Calc. NM(B)- 418-BD, which is superseded by Calc. NM(B)-323-BD. Thus, a proper reference for this elevation was not given. The elevation that was used is reasonable because Dwg. EP-79N-8 shows that the bottom of the pump is at elevation -49'-0".				
	 To compute RSS pressures during ECCS injection phase containment spray, a sump level of elevation of -25'-2" is used. The reference for this level, Calc. US(B)-273, actually gives a level of -23.1 ft. 				
	The cumulative significance of the discrepancies discussed above is to overestimate system pressures by up to 26 psi. It is the engineering judgment of the reviewer that overestimating operating pressure is conservative and that reducing the estimated pressure by 26 psi would have a negligible effect on computed stresses in standard wall piping.				
		alid Invali	Review	Date	
Initiator	Wakeland J.F.			10/31/97	
LET I cont	Neti Anthenu A			10/31/07	

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Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report			DR No. DR-MP3-0571	
VT Mgr: IRC Chmn:	Schopfer, Don K Singh, Anand K	0			11/6/97 11/11/97
Date: INVALID:					
Date: RESOLUTION:					
Previously identified by NU? initiator: VT Lead: VT Mgr: IRC Chrm: Date:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptab	Review Needed	No Date
SL Commente:					
ortheast Utilities	ICA	VP	D	R No. DR-M	AP3-0573
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illstone Unit 3	Discrepan	cy Repo	ort		
Review Group:	System		DR	ALID	
Review Element:	System Design		Pol	ential Operab	lity issue
Discipline:	Mechanical Design			O Yes	any terret
Discrepancy Type:	Calculation			No No	
System/Process:	RSS				
NRC Significance level:	3		Date	FAXed to NU	1
			D	ate Published	: 11/15/97
Discrepancy:	Calculation . 9-236	-306GP			
	flow to 5000 gpm i Specification 2214 recommended tha provisions to moni tube vibration (Let that a theoretical e monitoring tube vi The purpose of ca the potential for ep shell side flow of 5 The discrepancy is reach any conclus calculations should been prepaired. Calculation 79-236 statements in 3DB need to be verified a flow of 4620 gpm	(Letter NES .803-020). t the initial stor the cont ter NES-18 invaluation we bration duri alculation 76 (cessive tub .000 gpm. that Calcu- ion. It recond be prepared .306GP sh S-NSS-003 1. The DBS in on the she	-18767 and Ac As a result of system startup ainment recirc 767). Subsequivould be perfor- ing system star 9-236-306 GP, be vibrations in lation 79-236-3 mends that med, but no othe ould be void ai , Rev. 0, Secti states that the oil side (see Sy	lendum 3 to the redesign procedure i ulation cool uently, it wai med instead tup. Rev. 0 is to the RSS H 806GP does for detailed or calculation and the valid ons 8.7 and RSS HX ca stem Requi	a, it was include ers for s decided d of evaluate Xs for a in not d ns have ity of 12.3.3 in accept rements
	REQ-MP3-RSS-04	27 and 053	33).		
		Valid	Invalid	Needed	Date
Initiator:	Wakeland, J. F.				10/28/97
VT Lead:	Neri, Anthony A	X	ō	ō	11/3/97
VT Mgr:	Schopfer, Don K		ā	ā	11/6/97
IRC Chmn:	Singh, Anand K				11/11/97
Date:	an baara i a' an i sa a daharan sa an baran sa	and the second	and a set of the second second second	Grander Contractory Andrews	
INVALID					
	and the state of the state of the state of the state of the		CHARTER OF MERICANIA PROFESSION OF COMPA		
Date:					
RESOLUTION:					
Previously Identified by NU?	🔿 Yes 🔘 No	Non Discre	epant Condition	O Yes	No
Initiation	(0000)	Acceptable	Not Acceptable	Needed	Date
Withdator:	Neti Anthony A				
VI Lead:	Schooler, Den K				
VT Mgr:	Schopher, Don K				
IRC Chrmn:	Singh, Anand K				
Date:					
SL Commenter					

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Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report	DR No.	DR-MP3-0573
ST. CONFICTOR	namen kan beren die verste der einer die einder die einer einer einer einer der der einer die der einer die der K		

Northeast Utilities Millstone Unit 3	ICA Discrepar	VP ncy Repo	ort	R No. DR-M	AP3-9574
Review Group: Review Element: Discipline: Discrepancy Type:	Configuration System Design Piping Design Drawing		DR 1 Pot	ALID ential Operab Yes No	ility Issue
NRC Significance level.	4		Date	FAXed to NU ate Published	: 11/15/97
Discrepancy: Description: Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID:	PDCR MP3-93-00 inlet and outlet of DCN DM3-S-0475 support (Dwg BZ- and attaches it to drawing BZ-19R-1 0475-93) the ident deleted. This is no H003 and -H005 s Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	9 Modificati pumps 3SW -93 of PDC 300A-26) for pipe suppor 0 Rev 2 (re tification of s t consistent should be ca Valid	ons to Service VP*P2A/B R MP3-93-009 r pipe support of t CP-319012-H evised to incom support CP-319 with the DCN. Illed out on dra	Water pipin adds a star CP-319012- 1005. Howe borate DCN 9012-H005 Both suppo wing BZ-19 Review Needed	ng on hdard H003 ver, in DM3-S- had been orts - R-10. Date 11/5/97 11/5/97 11/10/97 11/11/97
Date: RESOLUTION:					
Previously identified by NU?	🔿 Yes 🔘 No	Non Discre	Not Acceptable	C) Yes Review Needed	No Date
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K			0000	

Northeast Utilities	ICAVP		DR No. DR-	MP3-0575	
Millstona Unit 3	Discrepancy Repo	ort			
Review Group:	System	D	RVALID		
Review Element:	System Design	,	otential Operab	ility Issue	
Discipline.	Mechanical Design	100	O Yes		
Discrepancy Type	amponent Data		No No		
System/Process:	HVX	1 . Ta		24111	
NRC Significance level:	3	D	ate FAXed to NU	1	
			Date Published	1: 11/15/97	
Discrepancy:	Auxiliary Building Filter Unit C	harcoal Ads	orber Face V	elocity	
Description:	During review of the auxiliary exhaust filter units 3HVR*FLT face velocity, residence time,	building ven 1A/1B a disc and efficience	tilation system repancy rega cy was identif	n (ABVS) Irding the ied.	
	FSAR Table 1.8-1 Regulatory exception states that the dwel the carbon adsorber unit is 0.2 charcoal bed. Testing of the c face velocity of 46 fpm.	Guide 1.52, I time for the 1 sec. All fit harcoal is ba	Rev. 2 positi minimum 2 ters use a 4-i ised on a mai	on C.3.i inches of nch thick kimum	
	FSAR Table 1.8-1 Regulatory Guide 1.52, Rev. 2 position C.6.a exception states that the activated carbon adsorber section has a 4 inch bed and operating face velocity of 47 fpm (0.43 sec residence time). Table 2 of RG 1.52, Rev. 2 assigns a 95% decontamination efficiency for activated carbon sample having a methyl iodide penetration of less than 1%. It will be verified that within 31 days after removal, a 4 inch laboratory sample from the installed sample canisters will demonstrate a removal efficiency of 99% for methyl iodide when tested in accordance with ANSI N510-1980.				
	FSAR Section 9.4.3.2 states that the charcoal adsorber is designed for a 0.21-second dwell time per 2-inch depth for gases at a flow velocity of 47 fpm. Four-inch depth of charcoal is provided. The impregnated charcoal is capable of removing in excess of 99 percent of methyl iodide and 99.5% of elemental iodine.				
	Technical Spection Section 4.7.9 requires that a laboratory analysis of a representative carbon sample meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, for a methyl iodide penetration of less than 0.175%.				
	Specification 2170.430-065 Charcoal Adsorber Cells Design and Construction section states that the auxiliary building filters have a face velocity of 46 fpm and a minimum residence time of 0.22 sec. per 2 in of bed thickness. The bed depth shall be a nominal 4 in. thickness.				
	The laboratory test acceptanc 1 and Technical Specification each other.	e criteria sho Section 4.7	own in FSAR 9 do not agre	Table 1.8- e with	
			Review		
	Valid	Invalid	Needed	Date	

Northeast Utilities Millstone Unit 3	ICA Discrepan	VP icy Repo	ort	DR No. DR-MP3	
Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	Stout, M. D. Neri, Anthony A Schopfer, Don K Singh, Anand K				10/21/97 11/3/97 11/6/97 11/11/97
INVALID					
Date: RESOLUTION:				ang sa kang sa	
Previously identified by NU?	🔿 Yes 💌 No	Non Discre	epant Condition	Yes	No
initiator: VT Lead: VT Mg.: IRC: Chmn: Date:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptat	Revien: Needed	Date
SL Comments:					

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Northeast Utilities	ICAVP	DR No. DR-MP3-0594
Millstone Unit 3	Discrepancy Rep	port
Review Group:	System	DR VALID
Review Element:	System Design	Potential Operability lesue
Discipline:	Electrical Design	Ves
Discrepancy Type:	Calculation	No
SystemProcess:	DGX	
NRC Significance level:	4	Date FAXed to NU:
		Date Published: 11/15/97
Discrepancy:	Calculation of the Ampacity (Calculation 195E)	of the Diesel Generator Leads
Description:	Calculation 195E calculates review of this calculation for cables for the emergency di	the ampacity of several cables. The the ICAVP effort is limited to the esel generator.
	The ampacity of the 2000 M conduit was calculated using derating factors. The calcula applied to the ampacity of a for three closely spaced con However, the value used, 0. configuration, not for a horiz 36 of the calculation. The cal	ICM, 5 kV diesel generator feeders in g a Kerite Co. ampacity table and ation applies a derating factor to be single cable in an isolated conduit duits in a horizontal configuration. 85 is for three conduits in a vertical contal calculation as stated on page ilculation gives an ampacity value of
	I= 1654 × 0.85	5 = 1405 amperes
	The factor given in the Keriti three conduits in a horizontal cable ampacity, 1654 amper necessary to apply a conduit ampacity of a cable in an iso ampacity of the cable in three horizontally is:	e table used by the calculation for al arrangement is 0.91. The value of res, is for a cable in free air. It is t factor of 0.76 to obtain the plated conduit. Therefore, the se non-ferrous conduits arranged
	I= 1654 × 0.76 ×	× 0.91 = 1143 amperes
	This assumes that the cable ferrous conduits and that tha controlled. Field walk down of conditions do not match thos expected field condition. Thi Discrepancy Report DR-577	s are properly installed in non- at circulating currents have been observations indicate that "as built" se assumed in the calculations or the s is documented in configuration
	The thermal resistance throu conductor, #6 AWG cable is G of Appendix A using the for However, in a multiple condu- heat dissipation through the adjacent hot conductors. This resistance of the insulation. " "geometric factor" as describ of IEC 287-2-1. This section to use the appropriate geometric resistance	igh the insulation of the two calculated on page 9 of Attachment ormula for a single conductor cable. uctor there will be interference to insulation due to the presence of the s increases the effective thermal This is accounted for by the use of a bed in Section 2.1.1.2 and Figure 2 of the calculation should be revised etric factor for the two conductor

ICAVP Discrepancy Report

DR No. DR-MP3-0594

The ampacity calculation on page 9 of Attachment G of Appendix A uses a thermal resistivity of 3.5 K-m/W for both the insulation and jacket material. This is the value of the thermal resistivity given in Table 1 of IEC 287-2-1 for low voltage ethylene propylene rubber insulation. However, a different material is used for cable jackets. The thermal resistivity of the commonly used cable jacket materials arc 5 to 5.5 K-m/W. This will lower the ampacity of the two conductor, #6 AWG cable slightly.

On page 4 of Attachment 1 of Appendix A, the calculation of the mean shield diameter assumes one layer of shielding tape, while the calculation of the thickness of material between the conductor and jacket and the external diameter of the shield assume two layers of shielding tape. An explanation of this difference should be included in the calculation. Because the shielding tape is very thin (8 mils), the effect of this difference on the calculation results is negligible.

The loss factor for the diesel generator cable shield is calculated on page 7 of Attachment 1 of Appendix A. The shield loss was calculated for the outer phase of the three phase set with leading phase. The standard being applied, IEC 287-1-1, presents separate formulae for the shield loss of each of the three phases when they are in a flat arrangement. For the generator cables, the shield loss of the center phase will be about 1% of the total cable loss compared to the shield loss of 0.3% of the total cable loss for the outer phase considered. Therefore, calculating the shield loss for the center phase would be more conservative than the outer phase used in the calculation. However, because the shield loss is so low, the difference in heat generation is about 0.7%, which is not significant to the final answer.

The temperature rise of the cable trench is calculated using the empirical formula of Section 2.2.6.2 of IEC 287-2-1. This section indicates that the validity of the formula given in this section is still being investigated. Portions of the "trench" are fairly 'arge rooms rather than a typical cable trench. Alternate methods of estimating the ambient temperature in these large areas are given in the ASHRAE standards, which should be considered for use for sections A2 and B2. It should be noted that a significant part of these areas are below grade, and that the soil temperature below grade is less than the outside ambient temperature of 49°C used in colculation. Also, the heat from the cable tray was assumed to be distributed uniformly over the length of section A1, even though the cable tray is in only part of this length. Even if the heat is assumed to be dissipated in the section of the trench containing the cable tray, section A1 is not the limiting case.

Northeast Utilities Millstone Unit 3	ICA Discrepar	AVP hcy Rep	ort	DR No. DR-MP3-0	
initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID:	Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid S S S		Needed	Date 11/10/97 11/10/97 11/10/97 11/11/97
Date: RESOLUTION:		and Alatha a handari Alda di han			
Previously Identified by NU? Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	Yes No (none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discretable	Not Acceptab	Ves Review Needled	No Date

ortheast Utilities	ICA	VP	D	R No. DR	-MP3-0596
listone Unit 3	Discrepan	cy Repo	ort		
Review Group:	System	AND INC. THE REAL PROPERTY OF	DR	VALID	
Review Element:	System Design		Po	tential Opera	bility issue
Discipline:	Electrical Design			O Yes	
Discrepancy Type:	Calculation			No No	
NRC Significance level:	4		Det	- FAVed to b	
			Det	FALED IO N	
				Sate Publishe	NG: 11/15/97
Description:	One of the protect	ive devices	used for the S	Safety Rela	ted 4.16
	kV switchgear is a impedance bus dif Calculation 420CA	set of Gene ferential rei determine	eral Electric Ty ays at each of s the setting of	the two sw the PVD i	igh vitchgears. relays.
	voltage of the swit breaker rating at the symmetrical fault of reported in Calculat voltage element (calculated minimu	chgear (476 he normal o currents larg ation NL-05 100 volts) la m setting fo	30 volts). Howe perating voltage ger than 41,00 1. The existing eaves no marg or 41,000 amp	ever, the ci ge is highe 0 amperes 1 setting of pin from the eres fault c	rcuit r, and are the eurrent
	prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxim (49,000 amperes).	ing during fa culation met rent transfo I faults near ng of the Py e raised to a num interru	aults outside the hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of	niaed by the protective imes the co- conservation remains the co- relay volta through fa- the circuit	ve zone of omplete ve. Also, a are rare. ge uit current breakers
	prevent false tripp the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes).	ing during fa culation met rent transfo I faults near ng of the PV e raised to a num interru	aults outside the hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of	nined by the protective conservation of terminals relay volta through fa the circuit Review	ve zone of omplete ve. Also, are rare. ge uit current breakers
	prevent false trippi the relay. The calc saturation of a cun three phase bolted However, the settil elements should b equal to the maxin (49,000 amperes).	Valid	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accornodate a pting rating of	nined by the protective imes the co- conservation in terminals relay volta through fa the circuit Review Needed	Date
initiator:	prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes).	Valid	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of	niaed by the protective imes the co- conservation relay volta through fa the circuit Review Needed	be need to ve zone of omplete ve. Also, are rare. ge uit current breakers Date 11/4/97
initiator: VT Lead:	prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A	Valid	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of	nined by the protective conservation of terminals relay volta through fa the circuit Review Needed	Date 11/4/97
initiator: VT Lead: VT Mgr: IRC Chrm	prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxim (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accornodate a pting rating of	nined by the protective imes the co- conservation in terminals relay volta through fa the circuit Needed	Date 11/1/97 11/1/97
Initiator: VT Lead: VT Mgr: IRC Chrm:	prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of	niaed by the protective imes the co- conservation relay volta through fa the circuit Review Needed	Date 11/14/97 11/11/97
initiator: VT Lead: VT Mgr: IRC Chrm: Date: INVALID:	prevent false tripp the relay. The calc saturation of a cun three phase bolted However, the setti elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of	nined by the protective imes the co- conservation in terminals relay volta through fa the circuit Needed	Date 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chrwn: Date: INVALID:	prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of	nined by the protective conservation r terminals relay volta through fa the circuit Needed	Date 11/11/97 11/11/97
initiator: VT Lead: VT Mgr: IRC Chrmn: Date: INVALID: Date: RESOLUTION:	prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxim (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accornodate a pting rating of Invalid	nined by the protective imes the co- conservation in terminals relay volta through fa the circuit Review Needed	Date 11/1/97 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chrmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU?	Prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discare	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of Invalid	nined by the protective mes the conservation of the conservation of the conservation of the circuit of the circ	No
initiator: VT Lead: VT Mgr: iRC Chrm: Date: INVALID: Date: RESOLUTION: Previously Identified by NU?	Prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discare	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accornodate a pting rating of Invalid	nined by the protective imes the co- conservation in terminals relay volta through fa the circuit Review Needed	No
Initiator: VT Lead: VT Mgr: IRC Chrm: Date: INVALID: Date: RESOLUTION: Previously Identified by NU?	(100.4 volts). The prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discree	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of Invalid	nined by the protective imes the co- conservation r terminals relay volta through fa the circuit Review Needed	No Date
Initiator: VT Lead: VT Mgr: IRC Chrwn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lead:	(100.4 volts). The prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discree	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of Invalid	nined by the protective imes the co- conservation relay volta through fa the circuit Review Needed	No
initiator: VT Lead: VT Mgr: iRC Chrm: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? initiator: vi Lead: VT Mgr:	(100.4 volts). The prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the setti elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discree	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of Invalid	nined by the protective mes the conservation of the conservation of the conservation of the circuit of the circ	No
Initiator: VT Lead: VT Mgr: IRC Chrmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Mgr: IRC Chrmn:	(100.4 volts). The prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K Ves No (none) Iven, Anthony A Schopfer, Don K Singh, Anand K	Non Discret	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of Invalid	nined by the protective imes the co- conservation r terminals relay volta through fa the circuit Review Needed	No Date
Initiator: VT Lead: VT Mgr: IRC Chrm: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Mgr: IRC Chrm: Date:	(100.4 volts). The prevent false trippi the relay. The calc saturation of a curr three phase bolted However, the settin elements should b equal to the maxin (49,000 amperes). Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K Ves No (none) rven, Anthony A Schopfer, Don K Singh, Anand K	Non Discree	etting is detern aults outside th hodology assu- rmer, which is the switchgea /D differential accomodate a pting rating of Invalid	nined by the protective imes the co- conservation reminals relay volta through fa the circuit Review Needed	No

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Northeast Utilities Mills

ICAVP

DR No. DR-MP3-0603

tone Unit 3	Discrepancy R	leport
Review Group:	System	DR VALID
Review Element:	System Design	Potential Operability Issue
Discipline:	Electrical Design	O Yes
Discrepancy Type:	Calculation	No No
System/Process:	N/A	김 씨가 아무나 귀구하는 것이 같아.
NRC Significance level:		Date FAXed to NU:
		Date Published: 11/15/97
Discrepancy:	Discrepancies in Calcula MOVs*	tion #64E *Cable Sizes for Feeders to
Description:	The review of Calculation discrepancies in the calculation follows:	n #64E identified miscellaneous ulation. The specific items are as
	1) Interoffice Correspond identifies installed cable used in the calculation fo MCC. For the calculation with a running voltage of in the calculation (page 3 according to the memo is	dence C-02 attached to the calculation lengths which differ from the lengths in the feed from the load center to the of MOV feed cable lengths from MCCs 418 V (Table A), the cable length used b) is 479 feet. The installed length is 550 feet.
	2) Page 2 of the calculat .55(LRA @ rated voltage review of the reference d	tion identifies MOV ampacity as) as referenced in ETG-IV-4-1. A id not identify this basis.
	 Page 2 of the calculat #10 cables taken from IP reference did not identify 	ion identifies ampacities for #12 and CEA P-46-426. A review of the subject these ampacities.
	 Page 3 of the calculat 3 MCCs. Reviewing the for the affected MCCs yie than those used in the calculation. 	ion identifies the block load of MOVs at latest revision of the one line diagrams elds values approximately 20 hp higher loulation.
	5) Interoffice Correspond states that page 5 of the "Calculation #74E" instea short circuit consideration identify any basis for sho	dence C-02 attached to the calculation calculation should reference d of "Calculation #62E" as a basis for ns. A review of Calculation #74E did not rt circuit considerations.
	6) A review of the calcul the three MCCs analyzed whether or not they are li identified for the load cur the MCC running voltage	ation did not identify any basis for why I in the calculation were chosen i.e., miting. Also, no basis could be rent of the MCCs (150 A or 300 A) and (418 V or 422V).
	7) On pages 13, 14, and identified for choo any and determine the load center	15 of the calculation, no basis could be and voltage of 331 KV in order to r voltage.
	Some of these discrepant there are other conservat ensure adequate sizing of the conservative accepta	cies are non conservative; however, isms in the calculation which would f MOV power feeds. Most notably is noe criteria for starting voltage of safety

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Northeast Utilities Millstone Unit 3	IC Discrepa	AVP ncy Repo	ort	R No. DR-	MP3-0603
	related MOVs. T voltage, but a cri Therefore, the pl this discrepancy	The MOVs and teria of 80% ant's licensin is rated a Sig	e capable of s is used in the g and design t inificance Lev	arting at 70 calculation. basis is still el 4.	% rated
initiator: VT Lead: VT Mgr: IRC Ctenn:	Kiteri, J. Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid S S S S		Review Needed	Date 11/10/97 11/10/97 11/10/97 11/11/97
Dete: INVALID: Dete:					
Previously Identifie I by NU? Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Yes Review Needed	No Date

ICAVP Discrepancy Report

DR No. DR-MP3-0604

DR VALID **Review Group: System Review Element: System Design** Potential Operability Issue **Discipline: Electrical Design** Yea **Discorpancy Type:** Calculation No System/Piocess: N/A NRC Significance level: 4 Date FAXed to NU: Date Published: 11/15/97 Discrepancy: Discrepancies in Calculation #67E "Maximum Cable Lengths for Continuous Duty Motors* Description: The review of Calculation #67E identified miscellaneous discrepancies in the calculation. The specific items are as follows. 5 Page 6 of the calculation identifies nameplate starting current as 500.5 V phase angle 24.769. This should be 500.5 A phase angle 69.0226. The phase angle for starting terminal voltage is at a mislabaled. The correct values, however, are used in the zaiculation's equations. 2) Page 2 identifies IPCEA P54-440, Tr. 3 27 as a design input for K-Tray ampacities. Table 11 should use be listed. 3) The actual diameters used in Table A on page 2 of the calculation correspond to the maximum guaran eed values identified in the cable specification. This is no r-conservative with respect to using the minimum guaranteed values identified in the cable specification. 4) On page 5 of the calculation ar/ MCC voltage of 395.5 V is identified for motor starting conditions. This value is used in the equation for determining acceptable length of cable for motor starting and was calculated based on an MCC running voltage of 422 volts. The value is not conservative for the calculations involving MCCs with a running voltage of 418 or 416 volts. This discrepancy does not have an impact on the plant since a subsequent letter attached to the calculation states that all MCCs have a minimum running voltage of at least 422 V. However, the calculation still contains non-conservative results for MCCs with running voltages of 418 or 416 volts. These discrepancies are not considered to adversely impact the output of the calculation. There are conservatisms in the calculation which would ensure adequate sizing of motor power feeds. Therefore, the plant's licensing and design basis is still met and this discrepancy is rated a Significance Level 4. Review Valid invalid Needed Date aminin. wish J 11/10/97 VT Lead: Neri, Anthony A \boxtimes 11/10/97 VT Mgr: Schopfer, Don K 11/10/97

Date:

IRC Chenn: Singh, Anand K

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Northeast	t Utili	ities	
Millstone	Unit	3	

ICAVP **Discrepancy Report**

DR No. DR-MP3-0604

Date: RESOLUTION:					
Previously Identified by NU?	Ves No	Non Discr	epant Condition	O Yes	No
Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date

DR No. DR-MP3-0606 ICAVP Northeast Utilities **Millstone Unit 3 Discrepancy Report** DR VALID **Review Group: Programmatic Review Element:** Corrective Action Process Potential Operability Issue **Discipline:** Other Yes Discrepancy Type: Corrective Action No System/Process: N/A NRC Significance level: 4 Date FAXed to NU: Date Published: 11/15/97 Discrepancy: Inadaquate response for resolving the OIR 131 Description: The Millstone Unit 3's OIR131 "Description of Unresolved Item" block states the following: "The output voltage of each battery charger is automatically regulated in either float or recharging range to 0.5% of the setpoint voltage from an input voltage of 480V with a 10% variation." The above statement is from the FSAR Section 8.3.2.1.2.1 dated April 1997. The OIR's Discrepancy Closure Report * Background * block states the following: *OIR 131 questioned whether or not the station battery chargers were tested over the full range of the specified input voltages (480V ± 10% VAC). If not, consider performing the test during the battery charger testing." The OIR's Discrepancy Closure Report * Conclusion * block states the following: "The station battery chargers were satisfactorily tested over the full range of the specified input voltages at the factory in accordance with SPEC 260." The SPEC 260 Battery Charger Tests were attached to the OIR 131's Discrepancy Closure Report. These tests confirm that the station battery chargers were tested over the full range of the specified input voltages (480V ± 10% VAC) and that the output was within 0.5% of the setpoint voltages of 528V (480V +10%), 480V (480V +0%) and 432V (480V -10%) at a DC output range of 132.1 VDC to 131.3 VDC. The SPEC 260 Battery Charger Tests do upt confirm that the station battery chargers will automatically regulate to 0.5%. over the full range of the specified input voltages (480V ± 10% VAC) for the following specific charger DC outputs as stated in the FSAR: a) Battery float setting (See Note 1 below) b) Battery recharging (equalizing) setting (See Note 2 below) Note 1: The battery float voltage is 135 VDC as noted in Calculations BAT1-96-1241E3, Rev. 1, BAT2-96-1243E3, Rev. 1. BAT3-96-12453E3, Rev. 0 and BAT4-00-1246E3, Rev. 0. (This value may or may not be the same for the remaining Unit 3 batteries.) Note 2: The battery recharging (equalizing) voltage setting was not discovered in documents examined but is expected to be in the range of 137.4 to 140 VDC based on an equalizing value of

Northeast Utilities Millstone Unit 3	IC/ Discrepar	AVP ncy Repo	ort	DR No. DR-	AP3-0606
initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID:	2.29 to 2.33 volts Caruso, A. Ryan, Thomas J Schopfer, Don K Singh, Anand K	per cell. Valid S S S	Invalid	Roview Needed	Date 10/31/97 11/1/97 11/6/97 11/11/97
Date: RESOLUTION:		nor a transmission of statistics	ninga analy alkadin and alkading	ART AND THE THE ARTICLA PARTY AND	GANANG KANGKARTAN
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ortheast Utilities	IC	AVP		DR No. DR	-MP3-0607
ilistone Unit 3	Discrepa	ancy Repo	ort		
Review Group:	System	NEW PERSONNAL CONTRACTOR OF THE OWNER OF THE O	D	RVALID	The court of a source case of cases
Review Element:	Modification Design			Potential Opera	bility issue
Discipline:	Mechanical Design			O Y35	anny more
Discrepancy Type:	installation Implement	ation		No No	
System/Process:	RSS			and the second	
NMC Significance level:	•		D	ate FAXed to N	U:
				Date Publishe	id: 11/15/97
Discrepancy:	PDCR 3-94-135				
Description:	PDCR 3-93-135 the containment abandoned in pl	installed Tris floor for sum ace the Chem	odium Phos p pH control hical Addition	The PDCR Tank (CAT)	baskets or also).
	The CAT subsyst associated with The PDCR does The Pump List v Line and Valve I were abandoned	atem is part of the subsystem not address i vas revised fo Lists should b 1.	revising the L revising the L or the CAT pu e updated to	piping and v ine and Valu Line and Valu Imp (3QSS*I Indicate whi	ve Lists. ve Lists. P2). The ch lines
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ortheast Utilities	IC	AVP	DI	R No. DR-	MP 3-0014
lillstone Unit 3	Discrepa	ncy Repo	ort		
Review Group:	System	Landino na selekci sejetač amerijas snam m	DR V	ALID	an a
Review Element:	System Design		Pot	ential Operab	ility issue
Discipline:	Mechanical Design			O Yes	
Discrepancy Type:	Licensing Document			No	
System/Process: NHC Significance level:	3		Date	EAXed to NI	
nero orginicance revel.			Date	ate Published	1: 11/15/97
Discrepancy:	RSS Motor Acce	leration Time			
Description:	3DBS-NSS-003, up time is 2 seco offsite power is r	Rev. 0 states onds if offsite not.	s that the RSS power is availa	pump moto able and 1 s	or speed- second if
	This statement in inconsistent with the issue of RSS	n the design to the design bi effective time	basis summary asis calculation le, US(B)-270,	document which add Rev. 5.	is Iresses
	Calculation US(E acceleration time emergency diese from offsite pow	e is 0.8 secon el generator, a er. This concl	des that the RS ds if it is power and 3.2 second usion is based	red from the ssion on the assi	e wered umption
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ICAVP **Discrepancy Report**

DR No. DR-MP3-0616

Review Group:	System		DR	VALID	
Review Element:	System Design			stantial Oners	billiby lowers
Discipline:	Mechanical Design			otential Opera	Duity issue
Discrepancy Type:	Licensing Document			e tes	
System/Process:	RSS			. NO	
NRC Significance level:	3		Da	te FAXed to N	U:
				Date Publishe	d: 11/15/97
Discrepancy	RSS Pump Actua	tion Time in	Design Basis	Summary	Documen
Description	3DBS-NSS-003, I pumps will be end more than 19 sec	Rev. 0 state argized from onds.	s that in a LOI the EDG load	P event, the d sequencer	RSS
	The discrepancy consistent with the	is that a 19- e design bas	second actuat sis of the RSS	ion time is r system:	not
	1. According to L sequencer delays after receipt of CI and D 660 second sequencer delays supply of water to	SK-24-9.4A the start of DA signal and is after reco- start of the accumulate	, the emergen RSS pumps A id delays the s ipt of CDA sig RSS pumps to a in the contain	cy generato and B 650 start of RSS inal. The los o allow an a nment sump	or load seconds pumps C ad dequate
	According to T maximum allowat timer for RSS is 2	S Surveillar ble error in t 0 seconds.	nce Requirem he emergency	ent 4.6.2.2.0 diesel sequ	, the Jencer
	3. According to A LOCTIC Data Dec maximum time re start, come up to seconds.	ttachment E ck for Millsto quired for th speed and c	to US(B)-253 one Unit #3 LC be emergency connect to the	8, "Documer CA Analysi diesel gene essential bu	ntation of s," the rator to is is 14.0
	Therefore the mail is 684 seconds (6 and D it is 694 seconds	ximum actul 50 sec + 20 conds (660 s	lation time for sec + 14 sec) sec + 20 sec +	RSS pump: For RSS p	s A and B sumps C
		÷		Review	
		Valid	Invalid	Needed	Date
Initiator:	Wakeland, J. F.	3			11/2/97
VT Lead:	Neri, Anthony A	\boxtimes			11/3/97
VT Mgr:	Schopfer, Don K				11/6/97
IRC Chmn:	Singh, Ariand K				11/11/97
Date:					
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Date:	A Phall School and an annual budgets and an annual budgets and an annual budgets and an an an an an an an an a		and dissociated subset is a tank or our	al an	
PESOLUTION:					
Previously identified by NU?	🔿 Yes 🔘 No	Non Discre	epant Condition	O Yes	No
		Annestable	Not Associately	Review	
Initiator:	(none)	Acceptable	Not Acceptable	Needed	Date
VT Lead:	Neri, Anthony A			\boxtimes	
VT Mgr:	Schopfer, Don K			\boxtimes	

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Northeast Utilities Millstone Unit 3	IC/ Discrepa	AVP ncy Repo	ort	DR No. DR-MP3-06
IRC Chron:	Singh, Anand K			
Date: SL Comments:				

Iortheast Util@es Allistone Unit 3	IC Discrepa	AVP ancy Rep	ort	R NG. DR-	MP3-0633
Review Group:	System	erklers and colorison introduced an origin	DR	VALID	
Review Element:	System Design		Pol	ential Operat	with lesue
Discipline:	Electrical Design			O Yes	any record
Discrepancy Type:	Component Data			No No	
System/Process:	QSS				
rero alginicance level.	*		Date	FAXed to NL	h
			D	ate Published	11/15/97
Discrepancy:	No documentati change commite	on shows the	QSS pump mo B13620.	otor shroud	design
	Regulatory Com pump motor shr Electric to corre- motors. No doc motor shroud de Electric's recom	imission, date oud design ch ct the loosenin umentation sh sign has been mendations.	d August 27, 1 hange will be pung and cracking hows that the q h upgraded acc	990, a que ursued with problems uench spra cording to G	General With the y pump General
		Valid	Investid	Review	Data
Initiator:	Feinopid, D. J.	101		Needed	11/0/07
VT Lead:	Neri, Anthony A		H	H	11/6/07
VT Mar:	Schopfer, Don K		H	H	11/10/97
IRC Chenn:	Singh, Anand K	×	H	H	11/11/97
Date:		head	land and a second second second		
INVALID:					
Date:			nen anti-falscino, filocomo a tomo a	na landa da ar da	NAME OF TAXABLE PARTY OF TAXABLE
RESOLUTION:					
Previously identified by NU?	O Yes 🖲 N	o Non Discre	pant Condition	O Yes	No
Initiator: VT Lead: VT Mgr:	(none) Neri, Anthony A Schopfer, Don K	Acceptable	Not Acceptable	Review Needed	Date
IRC Chrmn: Date:	Singh, Anand K		В		

theast Utilities	ICA	VP	DR	No. DR-N	AP3-0634
Istone Unit 3	Discrepar	ncy Repo	rt		
Review Group:	System	ran Anal Prai Alan Andra Angelan di	DR V	ALID	ANNY ALSO AND ANY ALSO A
Review Element:	System Design		Pote	ntial Operabi	ility Issue
Discipline:	Electrical Design			O Yes	
Sustem/Process	Calculation			No No	
NRC Significance level:	4		Dete		
			Date	FAXed to NU	
			Da	te Published	: 11/15/97
Discrepancy:	Discrepancies in (Cable Ampac	city Calculation	S	
	Derating Cable Ar and Calculation, # 4.16 kV Loads" id calculations. The 1) On page 5 of 0 ampacity of #10 of discrepancy has r 2) Table-2 on pag for L-tray. Accord be routed in L-tray tray, they should in 3) Page 12 of Ca #195E, identifies horizontally. A re	mpacity for C 195E "Verify entified misc specific item Calculation # cable is ident to impact on ge 6 of Calcu ding to Calcu y. If these ca be addressed ilculation Chi a derating fa	Cables Routed i Cable Selectio ellaneous discr is are as follow 143E, the trans fied as 41 inste the calculation lation #143E id lation #67E, #4 ables can be va d in Table-2. ange Notice #3 ctor of .85 for 3 oppropriate refe	of Calcula of Calcula conduits in repancies	Bank" V and n the ue for This able sizes ables can d in L- tion spaced ttifies this
	derating factor as therefore, this dis calculation's outp	crepancy do ut.	e conservative es not adversel	value was y impact th	used; ne
	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve	crepancy do ut. cies are not c ulations. Th ill met, and the el 4.	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im nt's licensi report is re	used; ne npact the ng and ated a
	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve	crepancy do ut. bies are not o ulations. Th ill met, and the el 4.	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im int's licensi report is n Review	used; ne npact the ng and ated a
	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve	2.91. A more crepancy do ut. cles are not c ulations. Th ill met, and th el 4. Valid	onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im nt's licensi report is n Review	used; ne npact the ng and ated a Date
Initiator	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve	crepancy do ut. cies are not o ulations. Th ill met, and th el 4. Valid	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im nt's licensi report is n Review Needed	used; ne npact the ng and ated a Date 11/6/97
initiator: VT Lead	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A	5.91. A more crepancy do ut. bies are not o ulations. Th ill met, and th el 4. Valid	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im int's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/6/97
Initiator: VT Lead: VT Mgr:	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A Schopfer, Don K	2.91. A more crepancy do ut. bies are not o ulations. Th ill met, and th el 4. Valid	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im nt's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97
Initiator VT Lead VT Mgr iRC Chmn	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Ner, Anthony A Schopfer, Don K Singh, Anand K	2.91. A more crepancy do ut. bies are not o ulations. Th ill met, and th el 4. Valid S S S S	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im nt's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/16/97 11/11/97
Initiator: VT Lead: VT Mgr: iRC Chmn: Date	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A Schopfer, Don K Singh, Anand K	2.91. A more crepancy do ut. bies are not o ulations. Th ill met, and th el 4. Valid	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im nt's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chmn Date INVALID	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Ner, Anthony A Schopfer, Don K Singh, Anand K	2.91. A more crepancy do ut. cles are not o ulations. Th ill met, and th el 4. Valid	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im nt's licensi report is n Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/16/97 11/11/97
Initiator: VT Lead: VT Mgr: iRC Chmn: Date INVALID Date	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A Schopfer, Don K Singh, Anand K	2.91. A more crepancy do ut. bies are not o ulations. Th ill met, and th el 4. Valid	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im nt's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chmn Date INVALID Date RESOLUTION	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Ner, Anthony A Schopfer, Don K Singh, Anand K	2.91. A more crepancy do ut. cles are not o ulations. Th ill met, and th el 4. Valid S S	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy	value was y impact th dversely im int's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chmn: Date INVALID Date RESOLUTION Previously identified by NUT	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A Schopfer, Don K Singh, Anand K	o Non Discret	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy Invalid	value was y impact th dversely im int's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chmn IRC Chmn Date INVALID Date RESOLUTION Previously identified by NUT	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy Invalid	value was y impact th dversely im nt's licensi report is n Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97 11/11/97 11/11/97
Initiator: VT Lead: VT Mgr: iRC Chmn: Date INVALID Date RESOLUTION rreviously identified by NUT Initiator VT Lead	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A Schopfer, Don K Singh, Anand K	A more crepancy do ut. bies are not o ulations. Th ill met, and the el 4. Valid S Non Discret Acceptable	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy Invalid	value was y impact th dversely im nt's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97 11/11/97 11/11/97
Initiator: VT Lead: VT Mgr: IRC Chmn: Date INVALID Date RESOLUTION Previously identified by NUT Initiator VT Lead VT Mgr	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A Schopfer, Don K Singh, Anand K (none) Neri, Anthony A Schopier, Don K	Acceptable	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy Invalid	value was y impact th dversely im nt's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97 11/11/97 11/11/97 No Date
Initiator: VT Lead: VT Mgr: IRC Chmn Date INVALID Date RESOLUTION Previously identified by NUT Initiator VT Lead VT Mgr IRC Chms	derating factor as therefore, this dis calculation's outp These discrepand output of the calc design basis is sti Significance Leve Kish, J. Neri, Anthony A Schopfer, Don K Singh, Anand K	A more crepancy do ut. Dies are not oulations. The ulations. The life of the lif	e conservative es not adversel onsidered to ad erefore, the pla his discrepancy Invalid	value was y impact th dversely im int's licensi report is re Review Needed	used; ne npact the ng and ated a Date 11/6/97 11/10/97 11/11/97 11/11/97

Incomments	Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report	DR No. DR MP2-0634
	Dete: SL Comments:	Singh, Anano K	

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Page 2 of 2

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ICAVP **Discrepancy Report**

DR No. DR-MP3-0639

Review Group: Programmatic Review Element: Change Process **Discipline:** Piping Design **Discrepancy Type: Installation Requirements** System/Process: SWP NRC Significance level: 3

DR VALID

Potential	C	perat	oility	Issue
C)	Yes		
(6	No		

Date FAXed to NU:

Date Published: 11/15/97

Discrepancy: Not Obtaining NRC Relief for Temporary Non-Code Repair

Description: Temporary Alteration 3-97-027 approved 3/27/97 installed a temporary non-code patch over a pinhole leak in the "A" train Service Water piping. Unit 3 was in Cold Shutdown, Mode 5, with only the "A" train supporting other operating systems. The temporary patch was installed under AWO M3-97-07380 under the control of Condition Report (CR) M3-97-0918. In addition to the patch NU performed a flaw evaluation using the guidance of NRC Generic letter 90-05 and draft Code Case N-513 dated 8/13/92.

> NU initially declared the "A" Service Water train inoperable based on the leak, but then apparently elected not to isolate the "A" Charging Pump cooling heat exchanger but rather declare this portion of the "A" train operable based on the patch and the flaw evaluation. This is in accordance with Section 6.14 of the operability portion of NRC Generic Letter 91-18 which states: "For Class 3 moderate energy piping, the licensee may treat the system containing the flaw(s), evaluated and found to meet the acceptance criteria in Generic Letter 90-05, as operable until relief is obtained from the NRC." Generic Letter 90-05 states: "Temporary non-code repairs are not permitted on ASME code piping without prior relief from the NRC."

Draft Case N-513 was rejected three times by the ASME Main Committee since the 8/13/92 version. This Case titled "Evaluation Criteria for Temporary Acceptance of Flaws in Class 3 Piping" was issued by ASME on 8/14/97. Although NU's engineering evaluation M3-EV-970071, Revision 0, of the flaw was based on an obsolete draft, it appears to be technically acceptable. Note that Generic Letter 90-05 would have found either a non-welded repair or a "through-wall flaw" evaluation acceptable.

Nonetheless, Generic Letters 91-18 (Rev. 1), 90-05, 10 CFR 50.55a(g)(5)(iv) and IWB-3125(b) of ASME Section XI (referenced by IWD-3000) all require NRC relief for either a noncode repair or an acceptance by evaluation in a system which is operable, but degraded, as described above.

No evidence was found in the temporary alteration or CR packages that this relief was obtained.

	Valid	Invalid	Needed	Date
initiator: Sheppard, R. P.				11/6/97
VT Lead: Ryan, Thomas J				11/6/97
VT Mgr: Schopfer, Don K				11/10/97

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Northeast Utilities Millstone Unit 3	ICA Discrepar	VP hcy Repo	ort	DR No. DR-	MP3-0639
IRC Chrmn: Date: INVALID:	Singh, Anand K				11/11/97
Date: RESOLUTION:					
Previously Identified by NU? Initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	(none) Ryan, Thomas J Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptab	Yes Review Needed	Date

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Northeast Utilities Millstone Unit 3	ICA Discrepan	VP cy Repo	ort	R No. DR-M	NP3-065
Review Group: Review Element: Discipline: Discrepancy Type: System/Process:	Configuration System Installation Piping Design Installation Implementatio DGX	n	DR V Pot	ALID ential Operab Yes No	ility Issue
NRC Significance level:	3		Date	FAXed to NU	5
and the second se			D	ate Published	11/15/97
Discrepancy:	vValkdown Discrep	ancy of DG	X		
Description:	The following discr of the piping and m Diesel Generators 1. Pipe support CP	epancy iten nechanical ((DGX): 2-360512-H(ns were found equipment of t	during the the Emergen	walkdown ncy Z-60R-79
	Rev 1 is suppose to beams that are 5ft- support to be canti	o be suppor -3in apart. levered out	ted between to The field walko 2ft-8in from o	wo wide flan down found ne beam or	nge the nly.
	 Pipe support CP Rev1 has vertical t but not centered or 	-360267-H tube steel s n the flange	002 shown on upported from as shown on t	drawing BZ a wide flan the drawing	-60R-102 ge beam
	 Pipe support CP Rev1 has vertical t but not centered or 	2-360267-H(tube steel si n the flange Valid	002 shown on oupported from as shown on t	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date
Initiator:	2. Pipe support CP Rev1 has vertical t but not centered or Read, J. W.	P-360267-H(tube steel sin the flange Valid	002 shown on oupported from as shown on t	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97
initiator: VT Lead:	2. Pipe support CP Rev1 has vertical t but not centered or Read, J. W. Neri, Anthony A	P-360267-H0 tube steel s n the flange Valid ⊠ ⊠	002 shown on t upported from as shown on t Invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/
Initiator: VT Lead: VT Mç <i>r</i> :	2. Pipe support CP Rev1 has vertical t but not centered of Read, J. W. Neri, Anthony A Schopfer, Don K	P-360267-H(tube steel si n the flange Valid	002 shown on oupported from as shown on t Invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97
initiator: VT Lead: VT Mg/: IRC Chmn:	2. Pipe support CP Rev1 has vertical t but not centered or Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	P-360267-H(tube steel si n the flange Valid S S S S	002 shown on t upported from as shown on t Invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97 11/11/8/
Initiator: VT Lead: VT Mçr: IRC Chmn: Date:	2. Pipe support CP Rev1 has vertical t but not centered of Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	P-360267-H(tube steel si n the flange Valid S S S S	002 shown on t as shown on t Invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam 11/8/97 11/8/ 11/10/97 11/11/8/
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Initiator: VT Lead: VT Mçr: IRC Chmn: Date: INVALID: Date:	2. Pipe support CP Rev1 has vertical to but not centered on Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	2-360267-H0 tube steel sin the flange Valid	002 shown on t as shown on t Invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam 11/8/97 11/8/ 11/10/97 11/11/8/
Initiator: VT Lead: VT Mçr: IRC Chmn: Date: INVALID: Date: RESOLUTION:	2. Pipe support CP Rev1 has vertical t but not centered or Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	2-360267-H0 tube steel sin the flange Valld S	002 shown on t upported from as shown on t	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97 11/11/6/
Initiator: VT Lead: VT Mçr: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU?	2. Pipe support CP Rev1 has vertical to but not centered on Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	P-360267-H0 tube steel sin the flange Valid S Non Discret	D02 shown on tupported from as shown on t Invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97 11/11/6/
Initiator: VT Lead: VT Mçr: IRC Chmn: Date: INVALID: Date: Date: RESOLUTION: Previously Identified by NU?	2. Pipe support CP Rev1 has vertical to but not centered on Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	P-360267-H0 tube steel sin in the flange Valid S S Non Discret Acceptable	DO2 shown on a upported from as shown on t invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97 11/11/6/
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator:	2. Pipe support CP Rev1 has vertical to but not centered or Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	D02 shown on the as shown on t	drawing BZ a wide flam the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97 11/11/8/
Initiator: VT Lead: VT Mçr: IRC Chrmn: Date: INVALID: Date: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lead: VT Lead:	2. Pipe support CP Rev1 has vertical to but not centered on Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	D02 shown on the as shown on t	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97 11/11/8/
Initiator: VT Lead: VT Mçr: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lead: VT Lead: VT Mgr:	2. Pipe support CP Rev1 has vertical to but not centered or Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K Ves No (none) Neri, Anthony A Schopfer, Don K Singh Anand K	Acceptable	ported from as shown on t invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97 11/11/8/
Initiator: VT Lead: VT Mçr: IRC Chmn: Date: INVALID: Date: Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	2. Pipe support CP Rev1 has vertical to but not centered or Read, J. W. Neri, Anthony A Schopfer, Don K Singh, Anand K (none) Neri, Anthony A Schopfer, Don K Singh, Anand K	P-360267-H0 tube steel sin in the flange Valid S Non Discret Acceptable	ported from as shown on t invalid	drawing BZ a wide flan the drawing Review Needed	-60R-102 ge beam Date 11/8/97 11/8/ 11/10/97 11/11/8/

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ICAVP Discrepancy Report

DR No. DR-MP3-0282

Review Group:	System	DR INVALID
Review Element:	System Design	Potential Operability legue
Discipline:	Electrical Design	Vee
Discrepancy Type:	Calculation	No.
System/Process:	SWP	() IN
NRC Significance level:	4	Date FAXed to NU:
		Date Published: 11/15/97
Discrepancy:	SWP System Motor Oper	ated Valve Voltage Drop and Overload
Description:	Calculations 89-094-0012 the starting voltage of SW also select the heaters of valve motors.	1E3 and 89-094-00122E3 determine /P system motor operated valves. They the overload relays that protect the
	Comments applicable to t	both calculations:
	1. The PSS/U (OPAL) mo calculations need addition methodology of calculatin the motor at locked rotor a should be provided that do model. It is suggested that valve operator data that h data entry.	del used for the voltage drop nal documentation. The general ng the feeder impedance and modeling are correct. A reference or description escribes the remainder of the PSS/U t PSS/U print a report of the feeder and has been entered to simplify verifying
	2, The voltage drop calcul voltage at the MCC during input data in earlier revision used by PSS/U, and the v PSS/U calculation were an provided for each of these	lation uses three MCC voltages, the g degraded voltage conditions given as ons of rhe calculation, the MCC voltage oltage to which the results of the djusted to. References should be e voltages.
	3. The calculation of the n to as few as two significan the calculation are expect figures, and PSS/U appea	notor locked rotor kVA was carried out at figures, even though the results of ed to be to two or three significant ars to allow the free format entry of data.
	4. The locked rotor curren account for being located temperature. Coefficients given in PI-4. A reference 10CFR21 report of May 13 coefficients.	t of the valves is adjusted downward to in an area with a 49°C ambient for common valve operator motors are should be added to Limitorque's 3, 1993 which gives the meaning of the
	5. The allowable locked ro operator motors is calcula Class H insulation (180°C) manufacturer, Limitorgue,	tor and running time of the valve ted using the hot spot temperature for). However, the valve operator has stated that this hot spot

Northeast Utilities	ICAVP	DR No. DR-MP3-0282
Millstone Unit 3	Discrepancy Report	
	temperature was to provide marg temperature and radiation levels. the hot spot temperature for Class This will reduce the safe locked re motors.	in to allow for post-accident Limitorque recommends that s B insulation (130°C) be used. otor and running time of the
	6. The calculation assumes that this proportional to the voltage. This operator motors. The valve opera give the locked rotor and full load voltage. It is preferable that this is assuming that the current is proportional to the second secon	he current drawn by the motors s may or not be true for valve itor motor characteristic curves current at 1 and 1.1 per unit information be used rather than portional to the terminal voltage.
	Comments Specific to 89-094-12	1E3:
	1. The voltage at the terminals of as 395 volts. Performing the indic gives a terminal voltage of 396 ve	3SWP*MOV54B is calculated cated arithmetic operations olts.
	2. The "standard" valve operator operation. However, the settings 3SWP*MOV50A&B, and 3SWP*I different time rating. A reference cited.	motor is rated for 15 minutes of of 3SWP*MOV24A-D, MOV54A-D were based on a for the time rating used was not
	3. The adjustment of the locked r 3SWP*MOV24A-D due to ambien information published in PI-4 for t Electric characteristic curve M273 characteristics of the motor indica type.	otor current for ht temperature was based on the motor described by Reliance 35A. However, the ate that the motor is a different
	4. For motor operated valves 3S 3SWP*MOV24B, 3SWP*MOV24 3SWP*MOV24D,3SWP*MOV50A 3SWP*MOV54A, 3SWP*MOV54 3SWP*MOV54D, 3SWP*MOV57 3SWP*MOV57C, and 3SWP*MO Bypass" and "Close-to-Open Byp not match the bypass requirement Logic Diagram LSK-0-3B, Note 6 switch is bypassed through 95% of direction.	WP*MOV24A, C, A, 3SWP*MOV50B, B, 3SWP*MOV54C, A, 3SWP*MOV57B, 0V57D, the "Open-to-Close ass"statements on page 8 do at in the "General Notes" of .6, which states that the torque of valve travel in the safety
	Comments Specific to Calculation	n 89-094-122E3:
	1. The overload relay heater sele summary indicate that a G30T10 3SWP*MOV115A. However, the	ction calculation and the heater was used for voltage drop calculation was

ICAVP **Discrepancy Report**

DR No. DR-MP3-0282

based on the use of a G30T12 heater. The G30T10 heater has a higher resistance compared to a G30T12.

2. No reference is given for the coefficient used for adjusting the locked rotor current of 3SWP*MOV115B for ambient temperature. The motor type used for this valve is not listed in the correction c. efficients given in PI-4.

3. The text of the overload heate selection calculation has not been revised to indicate that the criterion that the pickup value of the instantaneous magnetic trip element exceeds 10 times the pickup rating of the thermal overload relays, even though this is apparent from the numerical results.

4. Note 1 on CCN4, pages 35 and 38 states that "TOL is bypassed during accident condition."" Although motor operated valves 3SWP*MOV102A and 3SWP*MOV102B are bypassed whenever the respective service water pump is running (reference CCN 1, Pages 6-9), Schematic Diagrams ESK-6AAU, ESK-6AAV, ESK-6AAW, and ESK-6AAX do not include a CDA signal bypass of TOL.

For motor operated valves 3SWP*MOV71A, 3SWP*MOV71B. 3SWP*MOV102A, 3SWP*MOV102B, 3SWP*MOV102C, 3SWP*MOV102D, 3SWP*MOV115A, and 3SWP*MOV115B, the "Open-to-Close Bypass" and "Close-to-Open Bypass" statements on page 8 do not match the bypass requirement in the "General Notes" of Logic Diagram LSK-0-3B, Note 6.6. In addition, the schematic diagrams show the torque switch bypassed at 100% of valve travel.

		Valid	Invalid	Needed	Date
Initiator:	Bloethe, G. William				11/11/97
VT Lead:	Neri, Anthony A				11/11/97
VT Mgr:	Schopfer, Don K				
IRC Chrmn:	Singh, Anand K				
I NAME AND ADDRESS OF TAXABLE PARTY.	Contraction and the second s	the topological state of the second state of t	the second s	The state of a local distance of the second state of the second st	the second second state of the second s

Date: 11/11/97

INVALID: In IRF-00818, Northeast Utilities has indicated that the calculations that are the subject of this discrepancy report are being revised. The revised calculations will be included in the ICAVP scope of review.

Date:					
RESOLUTION:					
Previously identified by NU?	O Yes	¥1	pant Condition	O Yes	No
Initiator: VT Lead: VT Mgr: IRC Chmn:	Blowthe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date
Printed 11/12/97 1:46:46 PM Date:		2.000101.000.00000000000000000000000000	the second s		Page 3 of

Page 3 of 4

ICAVP DRI Discrepancy Report

DR No. DR-MP3-0282

SL Comments:

Date:

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Northeast Utilities	ICAVP	DR No. DR-MP3-0283
Millstone Unit 3	Discrepancy Repo	rt
Review Group:	System	DR INVALID
Review Element:	System Design	Potential Operability Issue
Discipline:	Electrical Design	O Yes
Discrepancy Type:	Calculation	No No
System/Process:	QSS	Data PAYed to Mill
NHC significance level.		Date FAXed to NO.
		Date Published: 11/15/97
Discrepancy: Description:	QSS System Motor Operated A Thermal Overload Relay Heate Calculation 89-094-120E3 calc 3QSS*MOV34A&B. It also sele overload relay and the setting of element that protects the valve	Valve Starting Voltage and er Calculation ulates the starting voltage of ects the heater of the thermal of the magnetic instantaneous trip e motors.
	1. The details of the PSS/U (O drop calculations needs additio methodology of calculating the the motor at locked rotor is con should be provided that descrit model. It is suggested that PSS valve operator data that has be data entry.	PAL) model used in the voltage mal documentation. The general e feeder impedance and modeling rect. A reference or description bes the remainder of the PSS/U S/U print a report of the feeder and een entered to simplify verifying
	2. The voltage drop calculation voltage at the MCC during deg input data in earlier revisions o used by PSS/U, and the voltag PSS/U calculation were adjust provided for each of these volt	a uses three MCC voltages, the raded voltage conditions given as if the calculation, the MCC voltage to which the results of the ed to. Reference should be ages.
	3. The calculation of the motor to as few as two significant figures the calculation are expected to figures, and PSS/U appears to	locked rotor kVA was carried out ares, even though the results of be to two or three significant allow the free format entry of data
	4. The locked rotor current of t account for being located in an temperature. Coefficients for c given in PI-4. A reference shou 10CFR21 report of May 13, 19 coefficients.	he valves is adjusted downward to a area with a 49°C ambient ommon valve operator motors are ald be added to Limitorque's 93 which gives the meaning of the
	5. The allowable locked rotor a operator motors is calculated u Class H insulation (180°C). Ho manufacturer, Limitorque, has teimperature was to provide m temperature and radiation level the hot spot temperature for C	ind running time of the valve using the hot spot temperature for wever, the valve operator stated that this hot spot argin to allow for post-accident els. Limitorque recommends that lass B insulation (130°C) be used.

ICAVP Discrepancy Report

DR No. DR-MP3-0283

This will reduce the safe locked rotor and running time of the motors.

6. The calculation assumes that the current drawn by the motors is proportional to the voltage. This may or not be true for valve operator motors. The valve operator motor characteristic curves give the locked rotor and full load current at 1 and 1.1 per unit voltage. It is preferable that this information be used rather than assuming that the current is proportional to the terminal voltage.

7. The numerical results in the section of the calculation that selects the devices that protect the motors of 3QSS*MOV34A and 3QSS*MOV34B do not satisfy the criterion that the instantaneous magnetic trip element pick up at no more than 10 times the pickup current of the thermal overload relays. However, the text indicates that this criterion is satisfied.

8. For motor operated valves 3QSS*MOV34A and 3QSS*MOV34B, Note 1 on CCN 4, pages 38 and 41 states that "TOL is bypassed during accident condition." The schematic diagrams show that the accident signal is in series with a second permissive, and this series combination bypasses the TOL, not the accident signal alone.

9. For motor operated valves 3QSS*MOV34A and 3QSS*MOV34B, Article (C) (1) on page 7 states that the TOL should be bypassed during a safety signal. The schematic diagrams show that the accident signal is in series with a second permissive (RWST level - "not empty"), and this series combination bypasses the TOL, not the accident signal alone.

10. For motor operated valves 3QSS*MOV34A and 3QSS*MOV34B, the "Open-to-Close Bypass" and "Close-to-Open Bypass" statements on page 8 do not match the bypass requirement in the "Genera! Notes" of Logic Diagram LSK-0-3B. Note 6.6 which states that the torque switch is bypassed through 95% of valve travel in the safety direction.

	initiator: VT Lead: VT Mgr: IRC Chmn:	Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Valid	invalid	Review Needed	Date 11/11/97 11/11/97
	Date:	11/11/97				
	INVALID:	In IRF-00818, North celocations that an being revised. The ICAVP scope.	heast Utilit c me subje revised ca	ies has indic act of this dis liculations wi	ated that the crepancy rep Il be included	oort are d in the
	Date: RESOLUTION:					
-	And the second proceeding of the second s	and the second	inter - survivation in the second			

Northeast Utilities Millstone Unit 3	IC Discrepa	AVP ncy Repo	DF ort	No. DR-	AP3-0283
initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date

Northeast Utilities	ICAVP	DR No. DR-MP3-0284
Millstone Unit 3	Discrepancy Repor	rt
Review Group:	System	DR INVALID
Review Element:	System Design	Potential Operability Issue
Discipline:	Electrical Design	⊖ Yes
Discrepancy Type:	Calculation	No
System/Process:	RSS	Data EA Yard to Mill
NRC Significance level:		Date PARed to NO.
		Date Published: 11/15/9/
Discrepancy: Description:	RSS System Motor Operated V Overload Relay Heater Selection Calculations 89-094-112E3, 89-	on Calculations -094-117E3, 89-094-120E3, and
	89-094-332E3 calculate the sta devices for various RSS system	rting voltage and select protective n motor operated valves.
	Comments Applicable to All Ca	lculations
	1. The details of the PSS/U (Of drop calculations need addition methodology of calculating the the motor at locked rotor is com should be provided that describ model. It is suggested that PSS valve operator data that has be data entry.	PAL) model used in the voltage al documentation. The general reeder impedance and modeling rect. A reference of description bes the remainder of the PSS/U S/U print a report of the feeder and een entered to simplify verifying
	2, The voltage drop calculation voltage at the MCC during degl input data in earlier revisions of used by PSS/U, and the voltag PSS/U calculation were adjuste provided for each of these volta	uses three MCC voltages, the raded voltage conditions given as f the calculation, the MCC voltage e to which the results of the ed to. References should be ages.
	3. The calculation of the motor to as few as two significant figu the calculation are expected to figures, and PSS/U appears to	locked rotor kVA was carried out ires, even though the results of be to two or three significant allow the free format entry of data
	4. The locked rotor current of th account for being located in an temperature. Coefficients for cu given in PI-4. A reference shou 10CFR21 report of May 13, 19 coefficients.	he valves is adjusted downward to area with a 49°C ambient ommon valve operator motors are ald be added to Limitorque's 93 which gives the meaning of the
	5. The allowable locked rotor a operator motors is calculated u Class H insulation (180°C). Hor manufacturer, Limitorque, has	ind running time of the valve using the hot spot temperature for wever, the valve operator stated that this hot spot

Northeast Utilities	ICAVP	DR No. DR-MP3-0284
Millstone Unit 3	Discrepancy Report	
	temperature and radiation levels. L the hot spot temperature for Class This will reduce the safe locked rot motors.	mitorque recommends that B insulation (130°C) be used. for and running time of the
	6. The calculation assumes that the is proportional to the voltage. This operator motors. The valve operator give the locked rotor and full load of voltage. It is preferable that this int assuming that the current is proport	e current drawn by the motors may or not be true for valve or motor characteristic curves current at 1 and 1.1 per unit formation be used rather than rtional to the terminal voltage.
	Comments Specific to Calculation	89-094-112E3:
	1. The resistance of the feeder to 3 0.373 ohm. However, performing t shown results in a resistance of 0.3	3RSS*MV8838B is shown as he arithmetic operations 381 ohm.
	2. A reference for the stroke time of 3RSS*MV8838B could not be iden	of 3RSS*MV8838A and tified.
	3. The horsepower ratings for moto 3RSS*MV8838A and 3RSS*MV88 from 1.9 to 3.2 horsepower in the s and 11.	or operated valves 38B have not been revised sketches on CCN 2, pages 8
	Comments Specific to 89-094-117	E3:
	1. The section to calculate the star 3RSS*MOV38B indicates that the this valve is 1.9050 ohms. Howeve arithmetic gives a feeder resistance	ting voltage of resistance of the feeder for er, performing the indicated the of 1.907 ohms.
	2. The motors for 3RSS*MOV38A reference could not be found that changing the motor affected the vi	&B have been replaced. A indicated whether or not alve stroke time.
	3. The horsepower ratings for moto 3RSS*MOV38A and 3RSS*MOV3 0.33 to 0.7 horsepower on the sket 8 and 11.	or operated valves 8B have not been revised from tches shown on CCN 2, pages
	Comments Specific to Calculation	89-094-120E3:
	 The motor characteristic curve that the current at full load torque overload heater selection calculation 	for 3RSS*MOV23A-D indicates is about 0.6 ampere. The ion used a value of 0.39

ICAVP **Discrepancy Report**

DR No. DR-MP3-0284

ampere for the current at full load torque. This changes the minimum tripping time of the overload relay from infinity in the calculation to 225 seconds. Both values are greater than the valve duty cycle time of 60 seconds. The calculation indicates that the minimum overload relay tripping time for 2 times rated torque load is 125 seconds, while the overload relay time current characteristic curve indicates 90 seconds. Both values are greater than the valve stroke time of 30 seconds.

2. In the sections for calculating the terminal voltage of 3RSS*MOV20D and the selection of the overload relay heater for 3RSS*MOV20A-D, the changes to the original calculation were incompletely marked.

3. For motor operated valve 3RSS*MOV20B, the motor full load current (FLC) reference is given as Attachment 1, Page 1 on CCN3, page 32. However, the curve for this valve is shown on Attachment 1, Page 1A.

4. For motor operated valves 3RSS*MOV20A, 3RSS*MOV20B. 3RSS*MOV20C, 3RSS*MOV20D, 3RSS*MOV23A, 3RSS*MOV23B, 3RSS*MOV23C, and 3RSS*MOV23D, the "Open-to-Close Bypass" and "Close-to-Open Bypass" statements on page 8 do not match the bypass requirement in the "General Notes" of Logic Diagram LSK-0-3B, Note 6.6 which states that the torque switch is bypassed through 95% of valve travel in the safety direction.

Comments Specific to Calculation 89-094-332E3:

 The rated torque of the new motors for 3RSS*MV3387A&B is 5 foot pounds. However, the overload relay heater selection calculation indicates that twice the nominal torque of the motor is 8 foot pounds.

2. The calculation indicates that the tripping time of the overload relay at the current corresponding to twice the rated torque is 40 to 150 seconds. However, the overload relay time versus current curves indicate that the tripping time is 70 to 220 seconds. Both minimum values are greater than the valve stroke time of 12 seconds. Both maximum values are less the the valve motor thermal limit time of 248 seconds.

3. The original motors of 3F replaced with motors having greater torque output. A reference could not be found for the statement in the introduction to the CCN that the stroke time changed from 10 seconds to 12 seconds.

4. The horsepower ratings for motor operated valves 3RSS*MV8837A and 3RSS*MV8837F have not been revised.

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Page 3 of 4

Millstone Unit 3	ICA Discrepan	VP Icy Repo	ort	R No. DR-	MP3-028
	from 1.9 to 3.2 hor and 11.	rsepower in	the sketches o	n CCN2. p	ages 8
	5. Motor operated 3RSS*MOV8837B However this does	valves 3RS are referred not agree	S*MOV8837A d to as butterfly with P&ID EM-	and valves on 112C.	page 7.
Initiator: VT Lead: VT Mgr: IRC Chmn:	Bloethe, G. William Neri, Anthony A Schopfer, Don K Singh, Anand K		Invalid	Review Needed	Date 11/11/97 11/11/97
Date:	11/11/97				
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INVALID: Date: RESOLUTION: Previously identified by NU?	In IRF-00818, Nor calculations that a being revised. The ICAVP scope.	theast Utiliti are the subje e revised ca Non Discre	es has indicate oct of this discri- loulations will t	ed that the epancy rep be included	ort are in the
Northeast Utilities Millstone Unit 3	ICAV Discrepanc	P y Repor	DR t	No. DR-M	P3-0399
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Review Group: 5 Ruese w Element: 5 Discipline: N Discrepancy Tyre: L	ystem Design techanical Design icensing Document		Poter	ntial Operabili ◯ Yes ● No	ity Issue
NRC Significance level: 4			Date i	AXed to NU:	
			Da	te Published:	11/15/97
Discrepancy: Description:	FSAR Change Requ 3-94-135. FSAR Section 6.5.2 76, takes credit for by quench spray. S Trisodium Phospha quench spray is not	2.1, includin post accide Subsequent te Baskets sufficiently	3-76 is nut con g FSAR Chang nt removal of a to PDCR 3-94 in Containmen high to solubi	sistent with airborne rad -135, Instal t, the pH of lize radiolo Review Needed	97-MP3- dioiodine lation of the dine.
Initiatory	Eninamid D J	Valid	Invalio S	Needed	11/11/97
VT Lead:	Neri Anthony A	Н	N	H	11/11/97
VT Mor	Schooler, Don K	H	ñ	ā	
IRC Chmn:	Singh, Anand K		ă		
Date: INVALID:	10/30/97 Calculation 88-019 factor for quench s	-96RA Rev pray.	ision 2 applies	an iodine p	partioning
Date:	REAL SINCE A REAL AND AND AND AND A REAL AND A REAL AND A REAL AND A	AND	Andreaster		
RESOLUTION					
Previously Identified by NU?	Yes No	Non Discre	epant Condition	O Yes	No
Initiator VT Lead VT Mgr IRC Chmn Date SL Comments	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed S S S S	Date

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Page 1 of 1

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ICA Discrepan	VP icy Repo	ort	No. DR-N	AP3-0417
System	And All States and A	DR IN	VALID	
System Design Mechanical Design Component Data QSS		Potr	ential Operabl	ility Issue
		Date	FAXed to NU	1
		De	ate Published	: 11/15/97
Specification 2275 inconsistent w/ PD The plant compute Pavision P. and P.	0.601-023-00 DS & other er data base	01 shows a RW drwgs. PDDS, drawin 54 Revision 18	/ST tag nur g 2275.601 show the t	nber -023-001
number for the Re However, the tank Addendum 3 ident	fueling Wat design spe lifies the tan	er Storage Tan cification 2275. k tag number a	k to be 3Q 001-023 th is 3QSS-Th	SS*TK1. rough K1.
	Valid	Invalid	Review Needed	Date
Feingold, D. J.	H		Н	11/10/97
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NOR ALLE DELENSIONER COMMUNICATION COM AND	and a state of the second s	AN ALWARD THE MADE FOR THE OF A DAMAGENES	hanna ar ann an Anna an Anna Anna	DAD I. BURKING POINTING
🔿 Yes 🖲 No	Non Discr	epant Condition	O Yes	No No
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	ICA Discrepan System System Design Mechanical Design Component Data QSS 4 Specification 2275 inconsistent w/ PD The plant compute Revision R, and P number for the Re However, the tank Addendum 3 ident Feingold, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/10/97 This condition is of Editorial errors and Ves No (none) Neri, Anthony A	ICAVP Discrepancy Reports System System Design Mechanical Design Component Data QSS 4 Specification 2275.601-023-00 inconsistent w/ PDDS & other The plant computer data base Revision R, and P&ID EM-119 number for the Refueling Wat However, the tank design spe Addendum 3 identifies the tan Valid Feingold, D. J. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/10/97 This condition is considered a Editorial errors are outside the Neri, Anthony A	ICAVP DF Discrcpancy Report System Design Delays Mechanical Design Pote Component Data QSS 4 Date Specification 2275.601-023-001 shows a RW inconsistent w/ PDDS & other drwgs. The plant computer data base PDDS, drawin Revision R, and P&ID EM-115A Revision 18 number for the Refueling Water Storage Tan However, the tank design specification 2275. Addendum 3 identifies the tank tag number a Valid Invalid Feingold, D. J. Neri, Anthony A Discrepant Condition Acceptable Not Acceptable (none) Neri, Anthony A Discrepable Not Acceptable (none) Discr	ICAVP DR No. DR-M Discrepancy Report System System System System Design Potential Operabl Yes System Component Data Date FAXed to NU Date Published Specification 2275.601-023-001 shows a RWST tag nur inconsistent w/ PDDS & other drwgs. The plant computer data base PDDS, drawing 2275.601 Revision R, and P&ID EM-115A Revision 18 show the to number for the Refueling Water Storage Tank to be 3QS However, the tank design specification 2275.001-023 th Addendum 3 identifies the tank tag number as 3QSS-TH Addendum 4

SL Comments:

Northeast Utilities	IC	AVP	D	R No. DR-N	MP3-0431
Millstone Unit 3	Discrepa	cy Repo	ort		
Review Group:	System		DR IM	NALID	
Review Element:	System Design		Pol	ential Operab	ility Issue
Discipline:	Mechanical Design			O Yes	
System/Process:	RSS			() No	
NRC Significance level:	4		Date	FAXed to NU	i tha chu
			0	ate Published	: 11/15/97
Discrepancy:	FSAR Table 6.2-	61 is inconsis	tent with DBS	D 3DBS-NS	S-003 w
Description:	FSAR Table 6.2- containment to h Design Basis Sur Section 12.9.2, n a minimum capa	61 shows the ave a minimu mmary Docur equires the th city of 81.25	trisodium pho im capacity of nent 3DBS-NS sodium phosp cubic feet.	sphate basi 81.17 cubic SS-003 Rev hate basket	kets in c feet. ision 0, is to have
	Drawing 25212-5 each basket to be approximately 86 for the volume of basket framing m Revision 1. The required volumes	1365 Revision e 4'-11" X 4'-1 8 cubic feet of f the basket fin hembers is pr actual capac s documented	n 1 shows the 1" X 3'-9". The capacity for e aming. The d ovided on draw ity is greater the 1 at 81.17 and	Inside dime his results in each basket imensions of wing 25212- nan the mini 81.25 cubic	allowing of the 51366 imum feet.
		Valid	Invalid	Review	Data
initiator	Feinaoid D J	(T)	M	["]	11/10/97
VT Leed:	Neri Anthony A	H	B	h	11/10/97
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IRC Chrmn:	Singh, Anand K	ä	ă	ā	
Date:	10/30/97				
INVALID:	This discrepancy FSAR (81.17 cft) (81.25 cft) is the	is invalid. The and the Desisame for all	e volume of th gn Basis Sum practical purpo	ne TSP basi mary docum oses.	ket in the nent
Date:	ri 244 decembra da currente de la decimiente de cu	na na serie de la companya de la com	ik Witherson (1993) . Actively and	nd sith the random being state of a second	an a
RESOLUTION:					
Previously Ider.tified by NU?	🔿 Yes 🔘 N	o Non Discre	pant Condition	O Yes	No No
Initiator: VT Leod: VT Mgr: IRC Chmn:	(none) Neri, Anthony A Schopfer, Don K Singh, Anard K	Acceptable	Not Acceptable	Review Needed	Date
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ortheast Utilities	IC	AVP	DF	R No. DR-	NP3-0465
illstone Unit 3	Discrepa	ncy Repo	ort		
Review Group:	System	f allenhalt i og sener som en en er en en en er at en	DR IM	VALID	Lawaran di Canili Pitele
Review Element:	System Design		Pote	ential Operab	lity issue
Discipline:	Mechanical Design			O Yes	
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			D	ate Published	b 11/15/97
Discrepancy:	Spray Area Calo	ulation ES-22	29	and the second states which we have	
Description:	Calculation ES-2 for each QSS an pressure and at a	29 (Rev. 1; d RSS spray an elevated c	CGN 1) determ heads: at stan ontainment pre	ines the sp dard contai r sure.	ray area nment
	and other particul SWEC Safeguar was requested by indicated that Ca System. The col consistent with th a final conclusion not available.	lates in contr ds Generic C y RFI MP3-21 loulation PE- nolusions of t ne purpose, m n cannot be d	ainment. This f alculation PE-1 78. Response I 125 could not t he calculation in nethodology an irawn since Cal	actor come 125. This c M3-IRF-002 be found in appear to b d inputs. H culation PE	es from alculation 222 the NU e lowever, 5-125 is
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Initiator:	Langel, D.				11/11/97
VT Lead:	Neri, Anthony A				11/11/97
VT Mgr:	Schopfer, Don K				
IRC Chmr.	Singh, Anand K				
Date	11/11/97			e	
INVALID	This DR is invalid discrepant condition	d. The appro tion is already	priate informat y included on D	ion regardii R-MP3-040	ng this 64.
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RESOLUTION					
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VT Lead:	Neri, Anthony A				
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lortheas: Utilities	ICA	VP	DR	No. DR-MI	23-0531
Aillstone Unit 3	Discrepand	cy Repor	rt		
Keview Group: 1	System	NACTURE AND A RECTOR OF A DATA OF A DATA	DR INV	ALID	
Review Element: 1	System Design		Poter	ntial Operabili	ty issue
Discipline: I	Mechanical Design			O Yes	
Discrepancy Type:	Calculation			No No	
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into advincence man.			Date	A Published	11/15/07
Discrepancy	Calculation 554D			e r amierrea.	11/10/01
Concernpancy.	Calculation 554P	Devi (D) date	mines the hei	shi of wator	in the
Description:	RSS Pump Cubicle walls were added a	is if new struss shown on	Drawings EC-	e added. T 32A and EC	hese -32F.
	The calculation refe water discharge rat 418P was supersed P(R)-1194 indicate approximately 560	erences Cal le from a lin ded by Calco s the worst gpm.	culation 418P e break of 787 ulation P(R)-11 case line break	(Rev. 0) for gpm. Calc 94. Calcul will discha	the ulation ation rge
		Mallel	Investig	Review	Date
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WT Load	Neri Anthony A	H		Н	11/11/97
VT Mar	Schooler Don K	Н	H	H	
IRC Chron:	Singh, Anand K	H	H	ă	
Date	11/11/97		a na interna da ser		
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invice.	calculation was su initially referenced This condition is n	the value w	revised and the vas not revised ed discrepant s	accordingly	which
	is bounding and yi	elds conser	vative results.	nee the nin	ial valu
Date	is bounding and yi	elds conser	vative results.		ial valu
Date	is bounding and yi	elds conser	vative results.		ial valu
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Northeast Util des	ICA	VP	D	R No. DR-	MP3-0532
vilistone onit 5	Discrepan	су керо	π		
Review Group: 1	System		DR IN	WALID	
Review Element:	System Design		Pol	ential Operab	ility lesue
Discipline: I	Mechanical Design			O Yes	
System/Process:	RSS			No No	
NRC Significance level:	4		Date	EAXed to NI	1.
				ate Published	4 11/15/07
Discrepancy	Calculation EEED			And P Gemeiner	
Description	Calculation 555P		Section 1.		
Description:	RSS Pumps can be arrangement.	Rev. 0) dete e accomplis	hed with the p	present pipi	ng
	The calculation did chosen for determin pipe and number of of pipe and the num greater than the shi test path. The com affected.	I not specify ning head k of fittings cou mber of fittin own on the clusions of f	which pump' oss. Because and not be dup ogs used in the referenced dri- the calculation	s flow test p of this, the clicated. The calculatio rawings for n are not ad	bath was length of le length n are any flow lversely
		Valid	Invalid	Review	Date
initiator:	Langel D.		171	rveeded ["]	11/11/97
VT Lead:	Neri, Anthony A	H	M	H	11/11/97
VT Mar:	Schopfer, Don K	H	H	H	
IRC Chmn:	Singh, Anand K	ŏ	ä	ŏ	
Date:	11/11/07	Record .	kees?	least .	
INVALID:	11/11/97 The calculation bounds all the flow test paths. The length of pi and number of fittings resulted in a higher loss coefficient than would be determined using the length of pipe and number of fittings for any flow test path from the referenced drawings.				
	fittings for any flow	v test path fr	om the refere	inced diami	ngs.
Date:	fittings for any flow	v test path fr	om the refere		ngs.
Date: RESOLUTION:	fittings for any flow	v test path fr	om the refere		ngs.
Date: RESOLUTION: Previously Identified by NU?	fittings for any flow	Non Discre	om the refere	O Yes	ngs.
Date: RESOLUTION: Previously Identified by NU?	Yes No	Non Discre	om the refere	O Yes Review	ngs.
Date: RESOLUTION: Previously Identified by NU? Initiator:	Yes (none)	Non Discre Acceptable	om the refere	Yes Review Needed	ngs. No Date
Date: RESOLUTION: Previously identified by NU? Initiator: VT Lead:	(none) Nen, Anthony A	Non Discre	pant Condition	Yes Review Needed	ngs. No Date
Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lead: VT Mgr:	(none) Neri, Anthony A Schopfer, Don K	Non Discre	pant Condition	Ves Review Needed	ngs. No Date
Date: RESOLUTION: Previously Identified by NU? Initiator: VT Lead: VT Mgr: IRC Chmn:	(none) Neri, Anthony A Schopfer, Don K Singh, Anand K	Non Discre	pant Condition	Yes Review Needed	ngs. No Date
Date: RESOLUTION: Previously identified by NU? Initiator: VY Lead: VT Mgr: IRC Chmn: Date:	(none) Nen, Anthony A Schopfer, Don K Singh, Anand K	Non Discre	pant Condition	Yes Review Needed	ngs. No Date

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DR No. DR-MP3-0533 ICAVP Northeast Utilities Mills': ne Unit 3 **Discrepancy Report** DR INVALIO **Review Group: System Review Element: System Design** Potential Operability Issue **Discipline: Mechanical Design** Yes Disc spancy Type: Calculation NO System/Process: RSS NRC Significance level: 4 Date FAXed to NU: Date Published: 11/15/97 Discrepancy: Calculation ES-237 Description: Calculation ES-237 (Rev. 0: CCN 1) determines the amount of water, from the RSS and QSS Sprays, held-up due to the kick plate at Elevation 3'-8". This is used to determine the amount of water available in the sump for the RSS Pump suction. Two cases are considered: 1) for water to hold-up the full 6" depth of the kick plate, and 2) for water to hold-up to a depth of 2" above the floor. The calculation did not consider a 4' wall by the Hoist Area in Steam Generator Cubicle A. The wall does not affect the second case since the location is close to the containment wall where the floor is 1" below the top of the kick plate. The wall affects the first case. This does not affect the conclusions of the calculation. Review Valid Invalid Date Needed Initiator: Langel, D. \boxtimes m 11/11/97 VT Lead: Neri, Anthony A \boxtimes 11/11/97 VT Mgr: Schopfer, Don K IRC Chron: Singh, Anand K Г Oate: 11/11/97 INVALID: The 4' wall reduces the amount of water held-up by 15 gallons. This increases the amount of water in the sump and available for RSS Spray. Therefore, not accounting for this quantity is conservative and is not a discrepancy. Date: RESOLUTION: Previously Identified by NU? O Yes No No Non Discrepant Condition Yes O No Review Acceptable Not Acceptable Date Needed Initiator: (none) \boxtimes VT Lead: Neri, Anthony A \boxtimes VT Mgr: Schopfer, Don K IRC Chrmn: Singh, Anand K X Date: Sa Constants:

Interne Linit 2	ICA	VP	D	R NO. DR-N	NP3-2536
istone Unit 3	Discrepand	су керо	n		
Review Group: 5	System		DR IN	WALID	
Review Element: 5	System Design		Pol	tential Operab	iity Issue
Discipline: !	Mechanical Design			O Yes	
Discrepancy Type: (Calculation			No No	
Syster Process: (QSS				
NRC Significance level: 4			Date	e FAXed to NU	
				Date Published	: 11.15/97
Discrepancy:	Calculation P(R)-93	34			
Description:	Calculation P(R)-93 friction loss in the C	34 (Rev. 0; 2SS Spray	CCN 1) deter Headers.	rmines the p	ping
	The pressure loss to pipe friction is base 6) is missing the Q ² throughout the calo	between no. d on the flo ^2 term. The culation.	zzles on the u ow rate square he equation is	opper header ad. The resi applied cor	r due to ult (Page rectly
	The overall pressur	re loss in th	e upper head	er (Page 7)	iterates
	past each set of no	zzles. The	first iteration	determines	the
	pressure loss to be	0.046 psi.	Using the eq	uations deve	eloped
	and the values give	en, this valu	ue should be (0.058 psi. T	his is a
	3.4% increase in th	e pressure	drop.		
	The property large	hehuren an	mine on the l	owner bender	due te
	The pressure loss t	between no	zzles on the l	ower neace	due to
	pipe inclion user ti	he inside di	ameter (ID) of	the piping.	ine
	10 02" The equation	Schedule	40 piping write	the nas an iL	101
	10.02 The equality	on (bage a)	uses an ito o	10.01	
	None of these item	s affects th	e conclusions	of the calc	ulation.
	None of these item	ns affects th	e conclusions	of the calc Review	ulation.
	None of these item	ns affects th Valid	e conclusions	s of the calc Review Needed	ulation. Date
Initiator:	None of these item	ns affects th Valid	ne conclusions	s of the calc Review Needed	ulation. Date 11/11/97
initiator: VT Lead:	None of these item Langel, D. Neri, Anthony A	valid	ne conclusions Invalid	s of the calc Review Needed	ulation. Date 11/11/97 11/11/97
initiator: VT Lead: VT Mgr:	None of these item Langel, D. Neri, Anthony A Schopfer, Don K	valid	ne conclusions Invalid	Review Needed	ulation. Date 11/11/97 11/11/97 11/6/97
Initiator: VT Lead: VT Mgr: IRC Chmn:	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K	valid	ne conclusions Invalid	s of the calc Review Needed	ulation. Date 11/11/97 11/11/97 11/6/97
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Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID:	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside	valid	invalid	s of the calcu Review Needed	ulation. Date 11/11/97 11/1/97 11/6/97
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID:	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside	valid	Invalid	Needed	ulation. Date 11/11/97 11/1/97 11/6/97 n this DR
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID:	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside 1. The equation is term is missing fro	valid	Invalid	nree items o	ulation. Date 11/11/97 11/6/97 n this DR e Q^2 pancy.
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID:	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside 1. The equation is term is missing fro 2. The difference	ered invalid correctly correctly cor	Invalid	Aree items of the calculated Review Needed	ulation. Date 11/11/97 11/1/97 11/6/97 n this DR e Q^2 pancy. gnificant.
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Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside 1. The equation is term is missing fro 2. The difference 3. The difference insignificant and n	ered invalid of 0.012 ps of 0.01 incl ot sufficien	Invalid	a of the calcu Review Needed	ulation. Date 11/11/97 11/6/97 n this DR e Q^2 pancy. gnificant. meter is
Initiator: VT Lead: VT Mgr: IRC Chmn: Date INVALID: Date RESOLUTION	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside 1. The equation is term is missing fro 2. The difference 3. The difference insignificant and n	valid Valid	Invalid	of the calcu Review Needed	n this DR 2022 2022 2020 2020 2020 2020 2020 20
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date RESOLUTION Previously identified by NUT	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside 1. The equation is term is missing fro 2. The difference 3. The difference insignificant and n	valid Valid Valid Careed invalid correctly of of 0.012 ps of 0.012 ps of 0.011 incl ot sufficien	Invalid	of the calcu Review Needed	ulation. Date 11/11/97 11/6/97 n this DR e Q^2 pancy. gnificant. meter is
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: NVALID: Date RESOLUTION Previously identified by NU3	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside 1. The equation is term is missing fro 2. The difference 3. The difference insignificant and n	valid Valid	Invalid	of the calcu Review Needed	allation. Date 11/11/97 11/1/97 11/6/97 n this DR a Q^2 pancy. gnificant. meter is No
Initiator: VT Lead: VT Mgr: IRC Chmn: Date INVALID: Date RESOLUTION Previously identified by NUT	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside 1. The equation is term is missing fro 2. The difference 3. The difference insignificant and n	Valid Valid Valid Cared invalid correctly correctly corr	Invalid	of the calcu Review Needed	allation. Date 11/11/97 11/6/97 n this DR a Q^2 pancy. gnificant. meter is () No Date
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: INVALID: Date RESOLUTION Previously Identified by NUT	None of these item Langel, D. Neri, Anthony A Schopfer, Don K Singh, Anand K 11/6/97 This DR is conside 1. The equation is term is missing fro 2. The difference 3. The difference insignificant and n	Valid	Invalid	of the calco Review Needed Needed nree items o n though the not a discrep cation is inside of a 10" dial ancy report. Yes Review Needed Needed	ulation. Date 11/11/97 11/6/97 n this DR e Q^2 pancy. gnificant. meter is () No Date

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Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report			DR No. DR-MP3-053	
VY Cests VT Mgr: IRC Chmn: Date:	Nen, Annony A Schopler, Don K Singh, Anand K				

orthoast Othices	IC	AVP		DR No. DR	-MP3-054
lillstone Unit 3	Discrepa	ncy Rep	ort		
Review Group:	System	NATURAL MANUFACTURE AND	DR	INVALID	NALES OF THE OWNER OF THE OWNER OF T
Review Element:	System Design		P	otential Onera	bility lesue
Discipline:	Mechanical Design			Yes	ionity table
Discrepancy Type:	Calculation			(No	
System/Process:	RSS				
NRC Significance level:	4		De	ite FAXed to N	IU:
				Date Publishe	nd: 11/15/97
Discrepancy	Calculation US(E	3)-311			
Description	Calculation US(E analysis using de Calculation US(E uses Stone & We	8)-311 (Rev. 9graded pum 8)-245 (Rev. 9bster Progra	0; CCN1) is 1 p curves. Thi 0; CCNs 1, 2 am HY-063 fo	the RSS brais is a supplet & 3). The calculation of	ement to calculation ation.
	The calculation of systems for mini- trains) safeguard gpm to determine second train nee 990,000,000. The approximately 10 the FSAR are ba significant.	letermines th mum (1 train . The program e convergence ded to be elin e results indi) gpm from th sed on this ca	e branch flow per system) a m uses a flow ce. For minim minated so the icate full flow he second trai alculation. Th	is for the EC and maximu differential hum safegua e head loss from one tra in. The flow he flows are	CCS of 0.5 ard, the was set to ain and v rates in n't
				Review	1.1
In Mint or	Langeri D	Valid	Invalid	Needed	Date
initiator:	Langel, D.				11/11/97
VI Lead:	Nen, Anthony A		×		11/11/97
	Schopfer, Don K				
VT Mgr.	The second				
IRC Chmn:	Singh, Anand K				
IRC Chmn: Date:	11/11/97	<u>U</u>			
Date:	11/11/97 A model of the sy flow rate change change is insignit since the system using a larger flow	vstem with ze in Train 1 les ficant. Furthe resistance in w rate.	ero Train 2 flo ss than 0.5 pe er, the calcula the common	w would res rcent. This ition is cons piping is ca	ult in a percent ervative liculated
Date:	11/11/97 A model of the sy flow rate change change is insignit since the system using a larger flow	vstem with ze in Train 1 les ficant. Furthe resistance in w rate.	ero Train 2 flo ss than 0.5 pe er, the calcula the common	w would res rcent. This ition is cons piping is ca	ult in a percent ervative ilculated
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Date: Date: Date: Date: Date: Previously identified by NU?	11/11/97 A model of the sy flow rate change change is insignif since the system using a larger flow	vstem with ze in Train 1 les ficant. Furthe resistance in w rate.	ero Train 2 flo ss than 0.5 pe er, the calcula the common	w would res rcent. This ition is cons piping is ca Ves Review	ult in a percent ervative ilculated
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Date: IRC Chmn: Date: INVALID: Date: RESOLUTION: Previously identified by NU? Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	11/11/97 A model of the sy flow rate change change is insignit since the system using a larger flow Ves (Nor (none) Nerl, Anthony A Schopfer, Don K Singh, Anand K	vstem with ze in Train 1 les ficant. Furthe resistance in w rate. Non Discre Acceptable	ero Train 2 flo ss than 0.5 pe er, the calcula the common spant Condition	w would res rcent. This ition is cons piping is ca Ves Review Needed	ult in a percent ervative ilculated

DR No. DR-MP3-0138 ICA /P Northeast Utilities **Discrepancy Report** Millstone Unit 3 **DR RESOLUTION ACCEPTED Review Group: System** Review Element: System Design Potential Operability Issue Discipline: Mechanical Design O Yes Discrepancy Type: Component Data No System/Process: HVX NRC Significance level: 4 Date FAXed to NU: Date Published: 9/19/97 Discrepancy: Tornado Damper Safety Classification Description: FSAR i able 3.2-1 classifies the Emergency Diesel Generator Enclosure ventilation system, except normal exhaust fan, as ANS Safety Class 3. The PDDS and PMMS databases identify tomado dampers 3HVP*DMPT2A/B/C/D as QA category I components. Review of specification 2103.430-668 identified the following discrepancies: 1. Specification 2103.430-668 Addendum 1 on page 2 of 7 and on datasheets 2-8, 2-9, 2-10, and 2-11 identifies the dampers as 3HVP-DMPT2A/B/C/D instead of 3HVP*DMPT2A/B/C/D which is used on the system P&ID EM-150C-15, physical drawing EB-7A-12, vendor drawing 2103.430-668-031D, and the plant databases (PDDS, PMMS). 2. Specification 2103.43C-668 datasheets 2-8, 2-9, 2-10, and 2-11 identify the dampers as QA III components instead of QA I. Vendor drawing 2103.430-668-031D does not identify the safety classification of the dampers. This we classified as a Level 3 as the vendor drawing does not clearly identify the dampers as QA I components instead of the QA III classification shown on the specification data sheets. Review Valid Invalid Needed Date 9/11/97 Initiator: Stout M D $[\overline{\alpha}]$ 9/11/97 VT Lead: Neri, Arithony A \square 9/12/97 VT Mgr: Schopfer, Don K \boxtimes 9/16/97 IRC Chrmn: Singh, Anand K \otimes Date: INVALID: Date: 10/14/97 RESOLUTION: NU has concluded that Discrepancy Report DR-MP3-0138 has identified a condition not previously discovered by NU which requires correction. Condition Report (CR) M3-97-3323 was written to provide the necessary corrective actions to resolve this issue. A review of the specification was conducted to verify that the ciascification of tomado dampors DMPT2A/B/C/D on the non-Q normal ventilation subsystem is an error of identification in the specification, and that the dampers were purchased to meet the Quality Category I requirements. The moults are summarized below.

Jortheast Utilities	ICAVP	DR No. DR-MP3-0138
Millstone Unit 3	Discrepancy Report	
	The specification sections: Seismi Assurance, Tests, Inspections and differentiate in the level of these a specification as QA Category I age Category III. The Testing, Inspect Checklist, page 1-44 of the specifi activities for all the items without of QA Categories.	c Requirements, Quality Documentation, do not ctivities for items listed in the ainst those listed as QA ion and Documentation (TID) cation, summarizes these TID distinguishing between listed
	The Procurement Quality Control or reviewed for the TID activities, and criteria, dampers 3HVP*DMPT2A/ same requirements as dampers de	documentation has been d for the following list of B/C/D were found to meet the esignated as QA Category I:
	· Welding Procedures, Welder Qu Filler Metals, Weld Filler Metals	alifications, Control of Weld
	· Visual Weld Inspection	
	· Low Hydrogen Electrodes	
	• Material Certificate of Compliance Analysis Report and Certificate of	e, Painting, Seismic Final Compliance
	 Operational Timing Test and Qua Testing was limited to a sample of the dampers listed as QA Categor Category I tomado dampers. 	alification Test - Qualification 12 dampers, which precluded y III, as well as 28 QA
	 Dimensional Check - Although the the extent of this activity, docume dampers were selected for inspect the dampers listed as QA Categor Category I. 	te specification does not define ntation shows that several tion. Precluded from this were y III, as well as 19 listed as QA
	 Packaging, Shipping, Records an Handling and Storage 	nd Certification for Packaging,
	ND. Procedures and NDT Perso	onnel Qualifications
	 Assembly and Marking, Docume Release Tag 	ntation Audit and Shipping
	The seismic qualification report ac treatment of all the dampers, inclu dampers, in one uniform manner.	ddresses the technical iding the "QA Category III"
	None of the vendor documents of safety classification of any dempe III. Activities of the manufacturer classifications and QA categories, testing, inspection and documenta the specification.	this purchase order identify the r, whether QA Category I or are not directed by the Safety but rather by the extent of ation required for each item in
	Based on the above it can be see 3HVF IPT2A/B/C/D were purch	n that dampers hased to the same

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Northeast Utilities **Millotone Unit 3**

ICAVP **Discrepancy Report**

requirements as other dampers purchased under the same specification that were designated as QA Category I. This results in the need to revise the specification only, therefore DR-MP3-0138 is considered an administrative issue. NU considers this to be a Significance Level 4 issue.

DR No. DR-MP3-0138

Previously identified by NU?	O Yes 🔍 N	o Non Discr	epant Condition	O Yes	No
initiator: VT Lead: VT Mgr: IRC Chmn: Date:	Stout, M. D. Neri, Anthony A Schopfer, Don K Singh, Anand K 10/14/97	Acceptable	Not Acce,stable	Review Needed	Dete 11/6/97 11/7/97 11/10/97 11/11/97

SL Comments: Based on information contained in response, classify discrepancy as a Level 4

Aillistone Unit 3 Review Group: Sys Review Element: Sys Discipline: Me Discrepancy Type: Dro System/Process: RS NRC Significance level: 4 Discrepancy: P. R Description: A O O Discrepancy: F. R Description: A O Significance initiator: F VT Lead: N VT Mgr: S IRC Chmn: S Date:	Discrepan tem tem Design chanical Design wing s & ID EM-112C-16 SS pump suction ocording to FSAR f containment rec pposite sides of t urpose of these of creen assembly the pair should on logged. However	does not sha lines. R Table 6.2-0 circulation pu he containm cross ties is t o supply eith e recirculation o supply eith	Pot DR RESOLUTY Pot Date Date Date Date Date Date Date Dat	ON ACCEPTED ential Operabilit Yes No FAXed to NU: bete Published: on each pair between each nes drawing f equired. The containment	10/10/97 of ch pair
Review Group: Sys Review Element: Syn Discipline: Me Discrepancy Type: Dro System/Process: RS NRC Significance level: 4 Discrepancy: P. R Description: A O O Discrepancy: P. R Description: A O S S It C W S S It C Date: S	tem tem Design chanical Design wing s &ID EM-112C-16 SS pump suction ocording to FSAR f containment rec pposite sides of t urpose of these of creen assembly t the pair should on logged. However oth remote manu	does not sh lines. R Table 6.2-6 circulation pu he containm cross ties is t o supply eith e recirculation or P&ID FM	DR RESOLUT Pot Date Date Date Date Date Date Date Dat	ON ACCEPTED ential Operabilit Yes No FAXed to NU: bate Published: on each pair between each nes drawing f equired. The containment	10/10/97 of ch pair
Review Element: Syn Discipline: Me Discrepancy Type: Dro System/Process: RS NRC Significance level: 4 Discrepancy: P R Description: A O O O P Sint th C Significance level: 4 NRC Significance level: 4	tem Design shanical Design wing S &ID EM-112C-16 SS pump suction according to FSAF f containment rea pposite sides of t urpose of these of creen assembly t the pair should on logged. However with remote manu	does not sh lines. R Table 6.2-f circulation pu he containm cross ties is t o supply eith e recirculation or P&ID FM	Pote Date D Dow cross ties 52, a cross ties 52, a cross ties on suction lin ent sump is m o allow either her or both reco on pump sucti	ential Operabilit Ves No FAXed to NU: Date Published: on each pair between each nes drawing f equired. The containment	10/10/97 of ch pair rom
Discipline: Me Discrepancy Type: Dro System/Process: RS NRC Significance level: 4 Discrepancy: P. R Description: A O O Description: A O S Initiator: F VT Lead: N VT Mgr: S IRC Chmn: S	All EM-112C-16 SS pump suction coording to FSAF containment rec pposite sides of t urpose of these of creen assembly the pair should on logged. However oth remote manu	does not sh lines. R Table 6.2-0 circulation pu he containm cross ties is t o supply eith e recirculation or P&ID FM	Date Dow cross ties 52, a cross tie imp suction lin ent sump is re o allow either her or both rec on pump sucti	Yes No FAXed to NU: Atte Published: on each pair between each nes drawing f equired. The containment	10/10/97 of ch pair
Discrepancy Type: Dri System/Process: RS NRC Significance level: 4 Discrepancy: P R Description: A O O O P Si Initiator: F VT Lead: N VT Mgr: S IRC Chmn: S Date:	&ID EM-112C-16 SS pump suction ccording to FSAF f containment rec pposite sides of t urpose of these of creen assembly the pair should on logged. However	does not sh lines. R Table 6.2-6 circulation pu he containm cross ties is t o supply eith e recirculation or P&ID FM	Date Dow cross ties S2, a cross ties imp suction lin ent sump is re o allow either her or both rec on pump suction	No FAXed to NU: Ate Published: on each pair between each nes drawing f equired. The containment	10/10/97 of ch pair
System/Process: RS NRC Significance level: 4 Discrepancy: P R Description: A O O P Si Initiator: F VT Lead: N VT Lead: N VT Mgr: S IRC Chmn: S Date:	&ID EM-112C-16 SS pump suction ccording to FSAF f containment rec pposite sides of t urpose of these of creen assembly t he pair should on logged. Howeve with remote manu	does not shi lines. R Table 6.2-forculation pu he containm cross ties is t o supply eith e recirculation or PAID FM	Date Dow cross ties 52, a cross tie imp suction lin ent sump is no o allow either her or both rec on pump sucti	e FAXed to NU: bate Published: on each pair between each nes drawing f equired. The containment	10/10/97 of sh pair rom
NRC Significance level: 4 Discrepancy: P R Description: A O O O P Si Initiator: F VT Lead: N VT Mgr: S IRC Chmn: S Date:	&ID EM-112C-16 SS pump suction ccording to FSAF f containment rec pposite sides of t urpose of these of creen assembly t he pair should on logged. However with remote manu	does not sh lines. R Table 6.2-6 circulation pu he containm cross ties is t o supply eith e recirculation or P&ID FM	Date Dow cross ties 62, a cross ties imp suction lin ent sump is m o allow either her or both rec on pump sucti	A FAXed to NU: bate Published: on each pair between each nes drawing f equired. The containment	of of of on pair
Discrepancy: P R Description: A O O P Si It C W VT Lead: N VT Lead: N VT Mgr: S IRC Chmn: S Date:	&ID EM-112C-16 SS pump suction ccording to FSAF f containment rec pposite sides of t urpose of these of creen assembly t he pair should on logged. However	does not sh lines. R Table 6.2- circulation pu he containm cross ties is t o supply eith e recirculation or P&ID FM	bow cross ties 52, a cross tie imp suction lin ent sump is ro o allow either her or both rec on pump sucti	on each pair on each pair between each nes drawing f equired. The containment	of of of rom
Discrepancy: P R Description: A O O P Si It C W VT Lead: N VT Mgr: S IRC Chmn: S Date:	&ID EM-112C-16 SS pump suction ccording to FSAF f containment rec pposite sides of t urpose of these of creen assembly t he pair should on logged. However with remote manu	does not sh lines. R Table 6.2-C circulation pu he containm cross ties is t o supply eith e recirculation or P&ID FM.	52, a cross ties imp suction line ent sump is re o allow either her or both rec on pump sucti	on each pair between eac nes drawing t equired. The containment	of ch pair rom
Description: A O O P Si Initiator: F VT Lead: N VT Mgr: S IRC Chmn: S Date:	ccording to FSAF f containment rec pposite sides of t urpose of these of creen assembly t he pair should on logged. Howeve with remote manu	R Table 6.2-6 birculation puthe containm cross ties is to supply either recirculation or P&ID FM	52, a cross tie amp suction lin ent sump is re o allow either her or both rec on pump sucti	between each nes drawing f equired. The containment	ch pair from
Initiator: F VT Lead: N VT Mgr: S IRC Chmn: S Date:		al valves.	112C-16 fails	circulation pu on screen be s to show a cr	sump mps in come ross tie
Initiator: F VT Lead: N VT Mgr: S IRC Chmn: S Date:				Review	
Initiator: F VT Lead: N VT Mgr: S IRC Chmn: S Date:		Valid	Invalid	Needed	Date
VT Lead: N VT Mgr: S IRC Chmn: S Date:	eingold, D. J.				9/18/97
VT Mgr: S IRC Chimin: S Date:	eri, Anthony A				9/16/97
IRC Chmn: 5 Date:	chopfer, Don K				9/19/97
Date:	ingh, Anand K				10/3/97
INVALID:					
Date:	11/3/97				
RESOLUTION: [Disposition:				
	NU has conclude dentifies a condit correction. P&ID design and config was incorrect. Th	d that Discre lion previous EM-112C-10 guration. The his was previ	pancy Report ily discovered 6 accurately n e description i ously identifie	DR-MP3-01 by NU which eflects the sy in FSAR Tab ed by UIR 970	52 i require stem le 6.2-62 0.
	Conclusion:				
	NU has conclude identifies a condi correction. The c incorrect. FSAF Table 6.2-62.	d that Discretion previous description in tCR 97-MP3	epancy Report sly identified to FSAR Table -82 has been	DR-MP3-01 by NU which i 6.2-62 was issued to cor	52 requires rect
Previously Identified by NU?	• Y85 () N	Non Disc	epant Condition	O Yes	No
				Review	
Initiatur:	Feingoid, D. J.	Accept auto	NOR ACCEPTED	Needed	Date 11/2/07
VT Lead:	Neri, Anthony A		Н	Ц	11/3/9/
VT Mgr:	Schopfer, Don K		H	H	11/4/3/
IRC Chmn:	Singh, Anand K	A	H	Н	11/1/01
Date:	and the second se	1.81			11/11/8
El Commenter		had			

Northeast Utilities	ICAVP	DR No.	DR-MP3-0152
Millstone Unit 3	Discrepancy Report		

K.

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Northeast Utilities	ICAVP			DR No. DR-MP3-0208			
Millstone Unit 3	Discrepancy Report						
Review Group:	Accident Mitigation		DR RESOL	UTION ACCEPT	ED		
Review Element:	System Design			Potential Operability Is			
Discipline:	Mechanical Design			Yes			
Discrepancy Type:	Licensing Document			No			
System/Process:	N/A		But PAN-AL INI				
rero argumeance rever.	•		Date FAXed to NU:				
				Date Publishe	d: 10/3/97		
Discrepancy:	Fast Closure Tim	e For Turbin	e Control Va	aives is Not V	/erified		
Description:	The accident ana states "Terminatic of external load o turbine control //a	alysis reported in FSAR §15.2.2.1, page 1 ion of steam flow to the turbine following a occurs due to automatic fast closure of the alves in approximately 0.3 seconds."					
	Review of the equ	uipment sper	cifications di	id not identify	data to		
	support this redui	ement.		Review			
		Valid	Invalid	Needed	Date		
Initiator:	Peebles, W. R.				9/12/97		
VT Lead:	Raheja, Raj D				9/12/97		
VT Mgr:	Schopfer, Don K				9/22/97		
IRC Chmn:	Singh, Anand K				9/27/97		
Date:							
INVALID:							
Date:	11/3/97		deren Adman schundter variante.		an a		
RESOLUTION	Disposition: NU has concluded identified a condit requires or rection S&L states in DR- specifications did made in FSAR Set turbine control val FSAR Sec. 15.2.2 control valves is 0 stop valves is 0.1 results in closing of The Main Turbine provided by Gene Engineering Corp (M002) as part of specification does time of the main t	d that Discretion previous n. MP3-0208, not identify ec. 15.2.2.1 Ives occurs 2 states that 0.3 seconds seconds, or of the stop v Control Val real Electric (oration (SW the main tur a not provide urbine contr	that review of data to supp that automation in approximation since the close and the c	of, DR-MP3-0 ed by NU which of equipment bort the staten tic fast closur ately 0.3 seco ose time of the severe transi- lyzed. MCV1 thru 4) Stone and We cation 2311.0 pe. The M002 oncerning the	208, has ch nent e of the onds. e turbine turbine ient which were obster 50-002 closing		
	Final Safety Analysis Report Condition Report (FSARCR) 97- MP3-42 was initiated on 3/8/97 by the 10 CFR 50.54f FSAR verification team. This FSARCR proposed revising FSAR Sec. 15.2.1 to change "approximately 0.3 seconds" to "not less than 0.3 seconds" for the turbine control valve closure time and to change "approximately 0.1 seconds" to "not less than 0.1						

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Nor	theas	t Utili	ities
Mill	stone	Unit	3

ICAVP **Discrepancy Report**

GE Power Generation Services was contacted and stated that closure times of the turbine stop valves and control valves are part of the GE internal design of the main turbine. GE also identified closure times of 0.5 to 0.8 sec for the turbine control valves and 0.2 to 0.5 sec for the turbine stop valves for the MP3 main turbine (turbine number 17OX578). The lower time values are for the ideal case with new valves. The higher time values are estimated times or valves on site as assembled.

The accident times assumed in chapter 15 are much faster than 0.3 seconds for the turbine control valve and 0.1 second for the turbine stop valve. The faster closure times result in a more severe transient. Therefore, these valve closure times are conservative with respect to the times stated is the FSARCR.

Conclusion:

NU has concluded that Discrepancy Report, DR-MP3-0208, has identified a condition previously discovered by NU which requires correction. FSARCR 97-MP3-42 was initiated on 3/8/97 by the 10 CFR 50.54f FSAR verification team to address this issue. The closure times provided by the vendor are conservative with respect to the times stated is the FSARCR.

Previously Identified by NU?	• Yes O No	Non Discre	pant Condition	O Yes	No
Initiator: VT Lead: VT Mgr: IRC Chmn: Date: SL Comments:	Peebies, W. R. Raheja, Raj D Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date 11/4/97 11/4/97 11/7/97 11/11/97

Aillstone Unit 3	Discrepanc	y Rep	ort		
Review Group: Review Element: Discipline: Discrepancy Type: System/Process: NRC Significance level:	Configuration System Design Electrical Design Installation Requirements SWP 4		DR RESOL	UTION ACCEPT Potential Opera Yes No No Nate FAXed to N	ED bility Issue U: vi: 9/29/97
Discrepancy:	Missing Support Det	ails	e a serie carine prime		
Description:	Tray support location detail types D102A, indicates via tabulati are on drawing 1217 document and its op for these support typ	n drawing D202A, D on that d 9-EE-34H en chang es.	12179-EE-3 104A, and D etail drawing IR. Rev. 4. e documents	4EX, Rev. 5 204A. This is for these s Review of the s did not reve	5 calls for drawing upports is eal details
		Valid	Invalid	Review	Data
loitiator:	Sarver T L	(C)	(T)	Needed	9/14/97
VT Lead:	Neri, Anthony A		Н	H	9/15/97
VT Mgr:	Schopfer, Don K		H	H	9/22/97
IDC Church	Singh Anand K	R	H	H	9/25/97

Date: 10/19/97

RESOLUTION: Disposition:

NU has concluded that Discrepancy Report, DR-MP3-0249, has identified a condition not previously discovered by NU which requires correction.

A discrepancy has been identified as missing support detail on drawing EE-34HR that requires a documentation update. The discrepancy is a drafting error on drawing EE-34HR. The support tabulation on drawing EE-34EX refers to three trays at different elevations on EE-34HR, however, drawing EE-34HR shows four trays in the support details. A note on drawing EE-34HR located at zone G4 says that the cable tray supports are similar to the corresponding non alpha numbered supports, and that drawing EE-34EX should be referred to for the appropriate elevation levels of the cable trays. Although the supports were properly constructed in the field, the design will be corrected and indicate what three trays belong to details D102A, D202A, D104A and D204A. Condition Report (CR) M3-97-3429 was written to provide the necessary corrective actions to resolve the issue.

Conclusion:

NU has concluded that Discrepancy Report, DR-MP3-0249, has identified a condition not previously discovered by NU which requires correction. The discrepancy is limited to a drafting issue on drawings EE-34HR. This is only a documentation change to drawing EE-34HR to clarify the support details.

Northeast Utilities Millstone Unit 3

ICAVP Discrepancy Report

DR No. DR-MP3-0249

Condition Report (CR) M3-97-3429 was written to provide necessary corrective actions to resolve the issue.						
Previously Identified by NU?	Yes No Non Discrepant Condition		O Yes	No		
Initiator: VT Lead: VT Mgr: IRC Chmn: Date:	Sarver, T. L. Neri, Anthony A Schopfer, Don K Singh, Anand K	Acceptable	Not Acceptable	Review Needed	Date 10/21/97 11/4/97 11/7/97 11/11/97	

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ortheast Utilities	ICA	VP	DR	No. DR-N	IP3-0408
Aillstone Unit 3	Discrepancy Report				
Raview Group:	System	annan ann ann an ann an an an an an an a	DR RESOLUTIO	N ACCEPTE	D
Review Element:	System Design		Pote	ntial Operabi	lity Issue
Discipline:	Mechanical Design			O Yes	
Discrepancy Type:	Component Data			No	
System/Process:	HVX		Date	A Vertice Mill	
NHC SIGNICANCE IEVEL.			Date	PARED to NO.	10/22/07
	Sector Sector Sector Sector		De	te Published	10/23/97
Discrepancy:	SLCRS Duct Cons	struction		and the second second	
Description:	During review of t Release System (identified regardin	he Suppleme SLCRS) the g the SLCRS	following discr ductwork con	liection and epancy was struction.	5
	FSAR Section 6.2 welded construction	.3.4 states th on.	at the SLCRS	duct is of a	all-
	upstream of the fi and SLCRS duct i LL. On page 2-33 ductwork shall be flanged transverse welded to the duc that SH constructi SMACNA High Pr specification does	n ESF buildin of the speci all welded co e joints shall t. On page 2- on class duc essure Duct not require of	ng which is con fication it state onstruction and have the flang 24 of the spec twork shall be Construction S class SH ductw	sthat SXH companio e internally tification it in accordan itandards. T vork to be a Review	lass SH- n angle seal states nee with The ill welded.
		Valid	Invalid	Needed	Date
Initiator:	Stout, M. D.	\boxtimes			10/6/97
VT Lead:	Neri, Anthony A				10/7/97
VT Mgr:	Schopfer, Don K				10/14/97
IRC Chmn:	Singh, Anand K				10/18/97
Date:					
INVALID:					
Date:	11/6/97	AANUN TUUNIN ALUUN A			NAMES AND A DESCRIPTION OF A DESCRIPTION OF
RESOLUTION	NU has concluded not represent a di 2170.430-565 ide and SH-LL, howe describes the Cla designation descr Classes of ductwo construction. Refe Specification 217 does not april	that Discrep screpant con ntifies the SL ver the SXH ss of ductwor ibes a "low le ork and requirer to the first 0.430-565 att this is not	cRS ductwork and SH portion k. The -LL follo akage" require res them to be two paragraph ached. Signific d'ucrepant con	DR-MP3-04 2-18 of Spe as Class S of the des owing the C ement for b of welded s on page 2 cance Leve dition.	408, does cification SXH-LL ignation class oth 2-22 of critenia
Previously identified by NU?	Ves No	Non Discre	pant Condition	• Yes	O No
				Review	
Initiator	Stout M D	Acceptable	Not Acceptable	Needed	Date
VTLead	Neri, Anthony A				11/6/97
scower	and a second				11/7/97
VT Mar:	Schopfer, Don K	kunif	hand	head	

Northeast Utilities Millstone Unit 3	ICAVP Discrepancy Report			DR No. DR-MP3-0408		
IRC Chrmn:	Singh, Anand K				11/10/97 11/11/97	
SL Comments:						