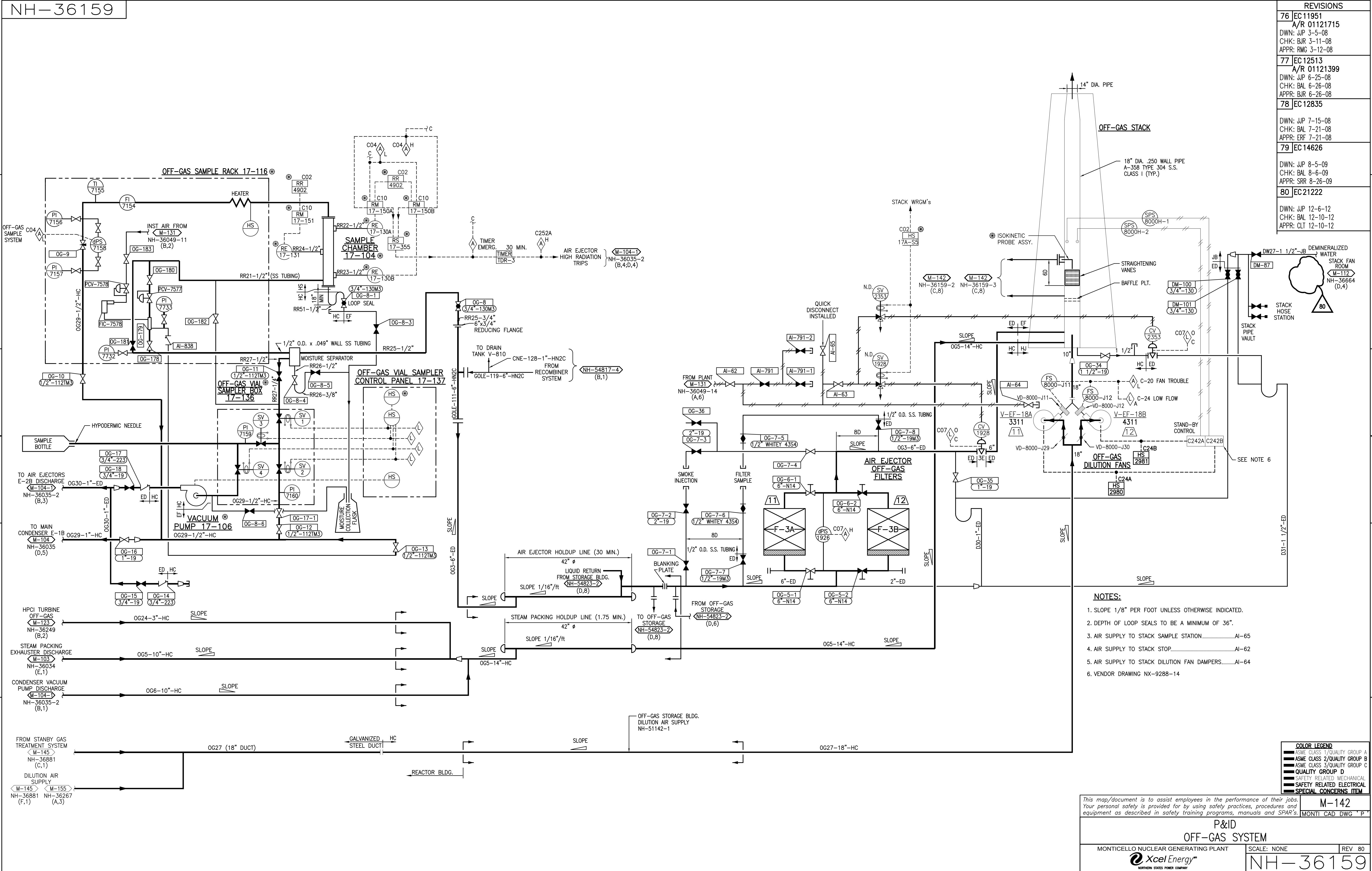




REVISIONS	
76	EC 11951 A/R 01121715 DWN: JJP 3-5-08 CHK: BJR 3-11-08 APPR: RMG 3-12-08
77	EC 12513 A/R 01121399 DWN: JJP 6-25-08 CHK: BAL 6-26-08 APPR: BJR 6-26-08
78	EC 12835 DWN: JJP 7-15-08 CHK: BAL 7-21-08 APPR: ERF 7-21-08
79	EC 14626 DWN: JJP 8-5-09 CHK: BAL 8-6-09 APPR: SRR 8-26-09
80	EC 21222 DWN: JJP 12-6-12 CHK: BAL 12-10-12 APPR: CLT 12-10-12

- NOTES:**
- SLOPE 1/8" PER FOOT UNLESS OTHERWISE INDICATED.
 - DEPTH OF LOOP SEALS TO BE A MINIMUM OF 36".
 - AIR SUPPLY TO STACK SAMPLE STATION.....AI-65
 - AIR SUPPLY TO STACK STOP.....AI-62
 - AIR SUPPLY TO STACK DILUTION FAN DAMPERS.....AI-64
 - VENDOR DRAWING NX-9288-14

COLOR LEGEND	
ASME CLASS 1/QUALITY GROUP A	
ASME CLASS 2/QUALITY GROUP B	
ASME CLASS 3/QUALITY GROUP C	
QUALITY GROUP D	
SAFETY RELATED MECHANICAL	
SAFETY RELATED ELECTRICAL	
SPECIAL CONCERNS ITEM	

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**P&ID
OFF-GAS SYSTEM**

MONTECELLO NUCLEAR GENERATING PLANT

SCALE: NONE

REV 80

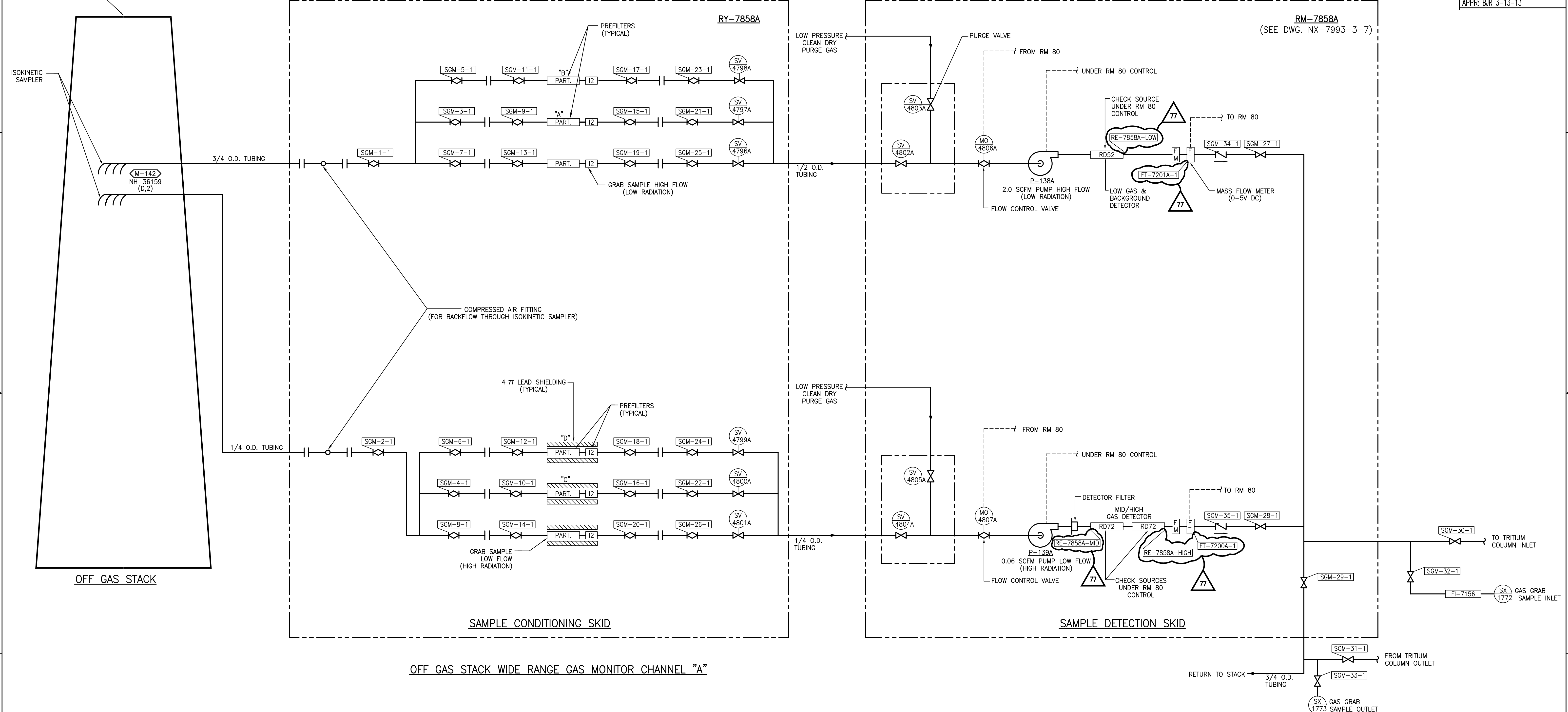
Xcel Energy
NORTHERN STATES POWER COMPANY

NH-36159

M-142
MONTI CAD DWG "P"

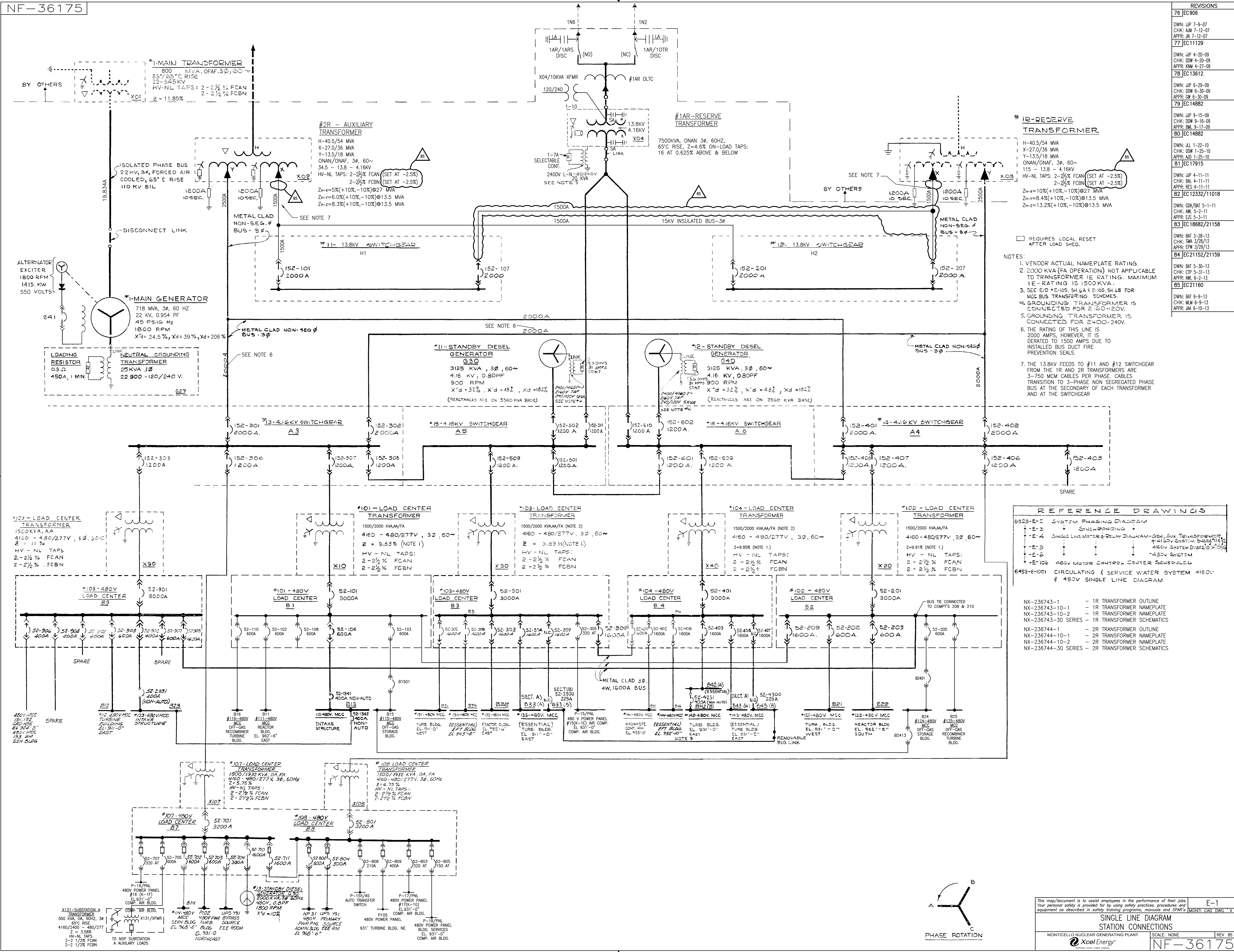
NH-36159-2

REVISIONS	
76	EC 11951 A/R 01121715 DWN: JJP 3-5-08 CHK: BJR 3-11-08 APPR: RMG 3-12-08
77	EC 20719 DWN: JJP 3-8-13 CHK: BAL 3-11-13 APPR: BJR 3-13-13



COLOR LEGEND	
■	ASME CLASS 1/QUALITY GROUP A
■	ASME CLASS 2/QUALITY GROUP B
■	ASME CLASS 3/QUALITY GROUP C
■	QUALITY GROUP D
■	SAFETY RELATED MECHANICAL
■	SAFETY RELATED ELECTRICAL
■	SPECIAL CONCERNS ITEM

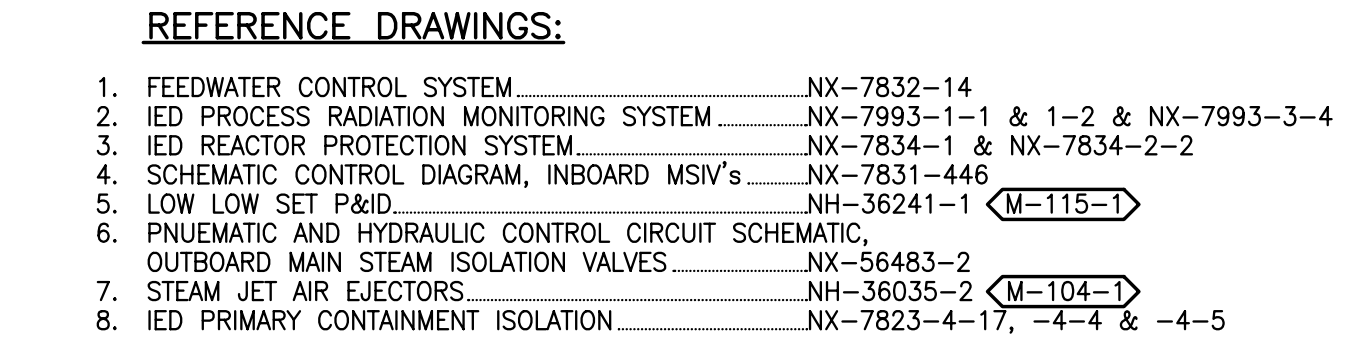
This map/document is to assist employees in the performance of their jobs. Your personal safety is provided for by using safety practices, procedures and equipment as described in safety training programs, manuals and SPAR's.		M-142 MONTICELLO CAD DWG 'B'
OFF GAS STACK GAS MONITOR CH. 'A'		
MONTICELLO NUCLEAR GENERATING PLANT  NORTHERN STATES POWER COMPANY	SCALE: NONE REV 77	NH-36159-2



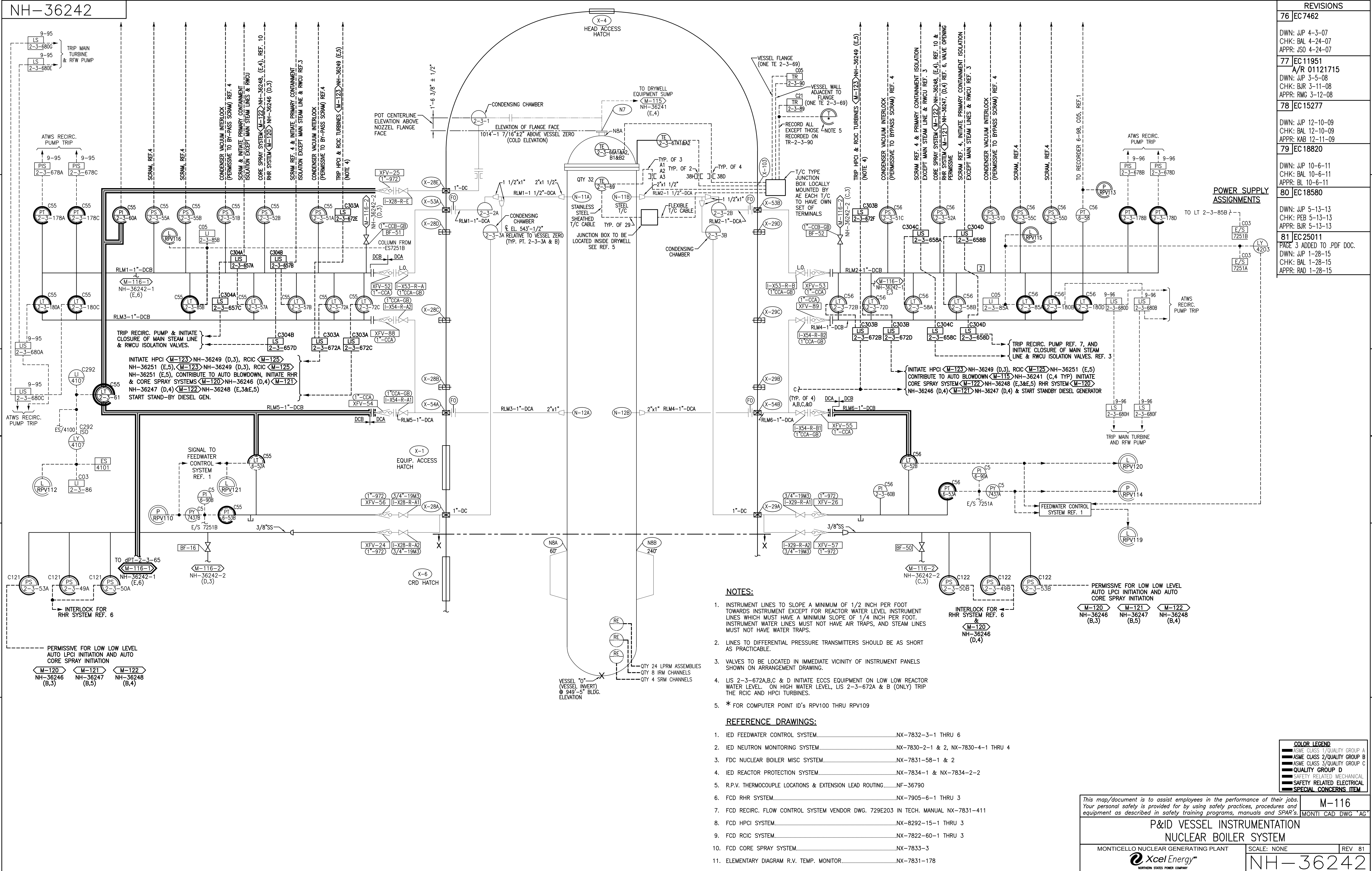
REVISIONS	
76	EC 79-06
DWN: JP 4-1-72 CHK: DOW 4-12-72 APPR: MK 7-12-72 77 EC 11129	
DWN: JP 4-20-09 CHK: DOW 4-20-09 APPR: NML 4-27-09 78 EC 13612	
DWN: JP 9-29-09 CHK: DOW 6-30-09 APPR: CM 3-30-09 79 EC 14882	
DWN: JP 5-15-09 CHK: DOW 5-17-09 APPR: DM 7-17-09 80 EC 14882	
DWN: LL 1-22-10 CHK: DOW 1-25-10 APPR: ADJ 4-25-10 81 EC 17915	
DWN: JP 4-11-11 CHK: BAL 4-11-11 APPR: RES 4-11-11 82 EC 12332/11018	
DWN: GSK/PAI 5-11-11 CHK: NML 5-11-11 APPR: GCS 5-11-11 83 EC 18682/21158	
DWN: BT 1-28-13 CHK: SM 3-29/13 APPR: LEW 3/29/13 84 EC 21152/21159	
DWN: BT 3-30-13 CHK: CPI 3-31-13 APPR: NML 6-2-13 85 EC 21610	
DWN: BT 6-19-16 CHK: NML 6-9-16 APPR: AA 6-10-13	

REVISIONS
C 21610

DWN: JJP 4-21-15
CHK: BAL 4-24-15
APPR: ALR 4-24-15



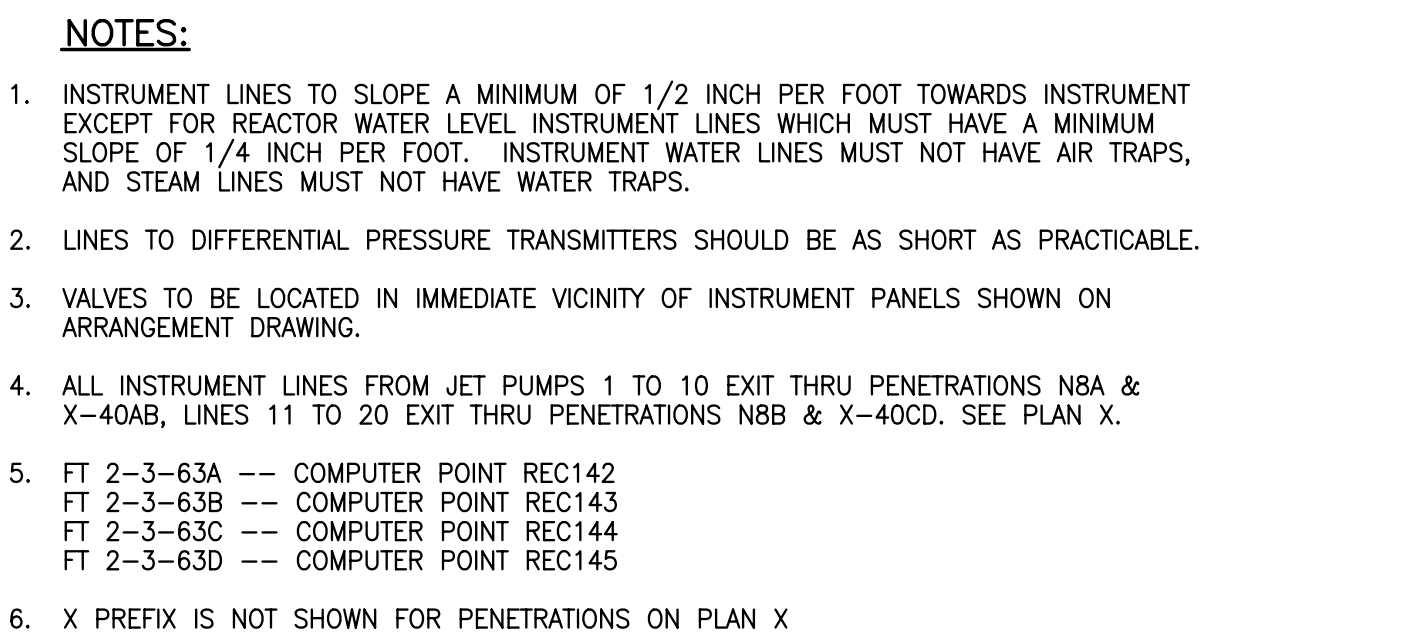
NUCLEAR BOILER SYSTEM-STEAM SUPPLY P & ID		
MONTEICELLO NUCLEAR GENERATING PLANT  NORTHERN STATES POWER COMPANY	SCALE: NONE NH-36241	REV 87



REVISIONS	
76	EC 7462 DWN: JWP 4-3-07 CHK: BAL 4-24-07 APPR: JSO 4-24-07
77	EC 11951 A/R 01121715 DWN: JWP 3-5-08 CHK: BUR 3-11-08 APPR: RMG 3-12-08
78	EC 15277 DWN: JWP 12-10-09 CHK: BAL 12-10-09 APPR: BL 10-6-11
79	EC 18820 DWN: JWP 10-6-11 CHK: PEB 5-13-13 APPR: BUR 5-13-13
80	EC 18580 DWN: JWP 5-13-13 CHK: PEB 5-13-13 APPR: BUR 5-13-13
81	EC 25011 PAGE 3 ADDED TO .PDF DOC. DWN: JWP 1-28-15 CHK: BAL 1-28-15 APPR: RAD 1-28-15

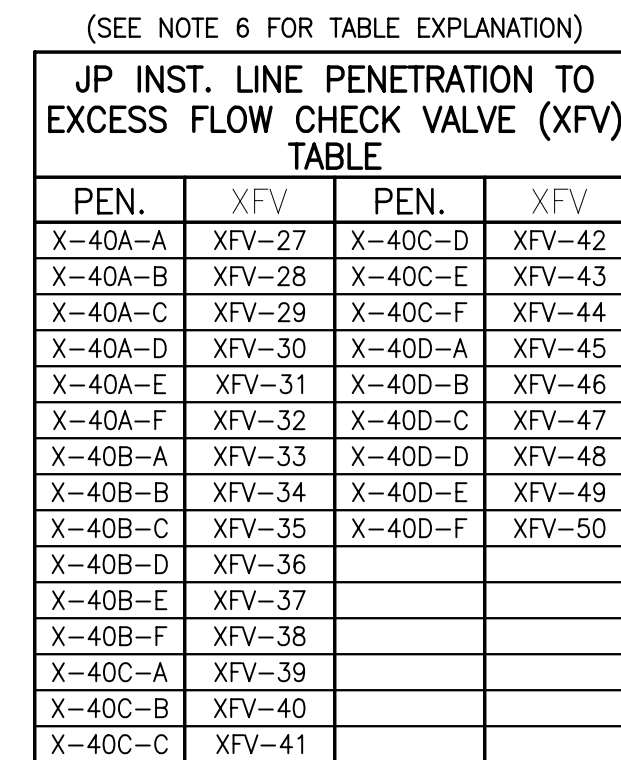
COLOR LEGEND	
	ASME CLASS 1/QUALITY GROUP A
	ASME CLASS 2/QUALITY GROUP B
	ASME CLASS 3/QUALITY GROUP C
	QUALITY GROUP D
	SAFETY RELATED MECHANICAL
	SAFETY RELATED ELECTRICAL
	SPECIAL CONCERNS ITEM

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M-116 MONTICELLO CAD DWG "AG"	
P&ID VESSEL INSTRUMENTATION NUCLEAR BOILER SYSTEM	
MONTICELLO NUCLEAR GENERATING PLANT Xcel Energy NORTHERN STATES POWER COMPANY	SCALE: NONE REV 81
NH-36242	



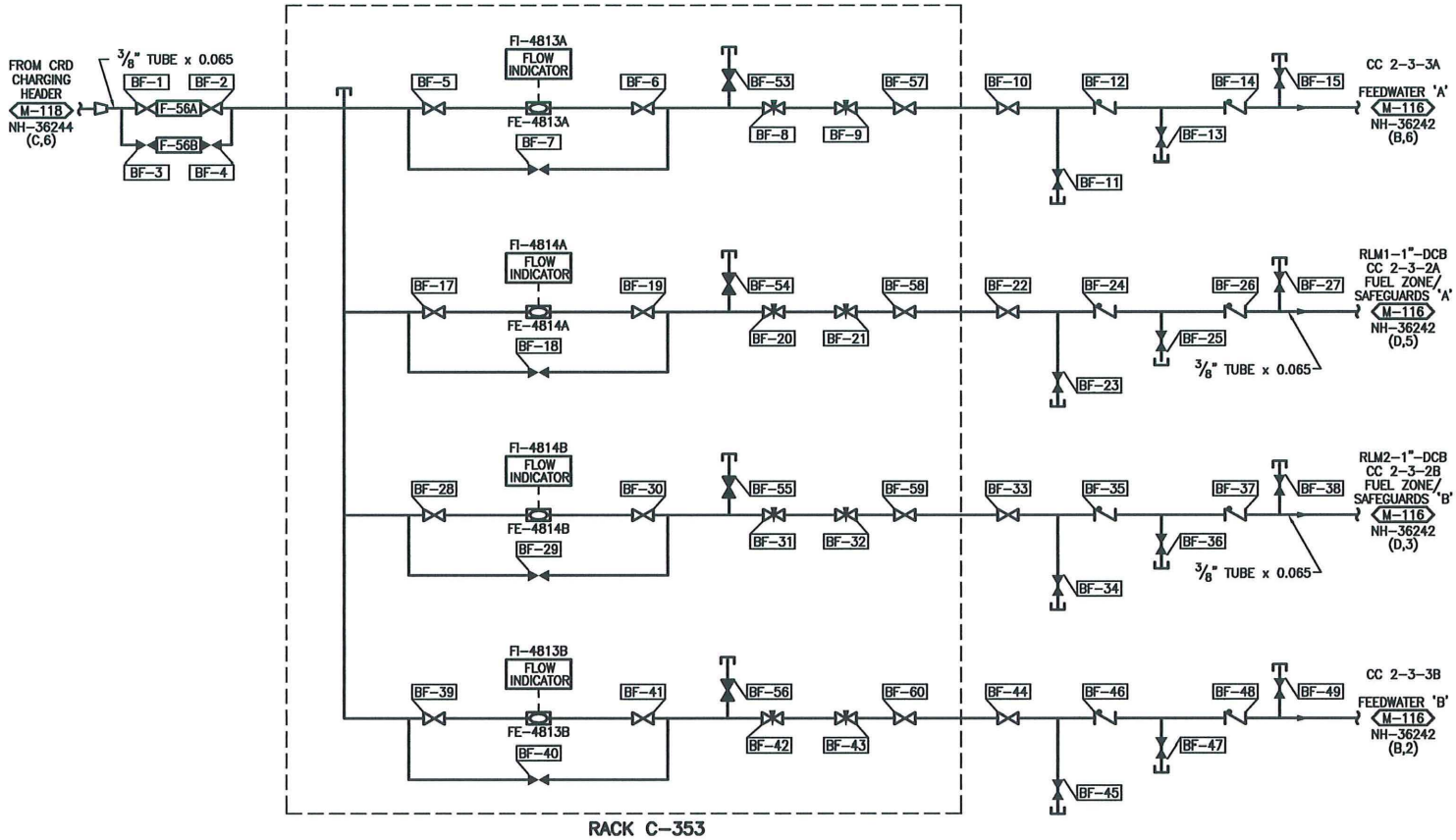
REFERENCE DRAWINGS:

1.	IED FEEDWATER CONTROL SYSTEM.....	NX-7832-3-1 THRU 6
2.	IED NEUTRON MONITORING SYSTEM.....	NX-7830-2-1 & 2, NX-7830-4-1 THRU 4
3.	FDC NUCLEAR BOILER MISC SYSTEM.....	NX-7831-58-1 & 2
4.	IED REACTOR PROTECTION SYSTEM.....	NX-7834-1 & NX-7834-2-2
5.	R.P.V. THERMOCOUPLE LOCATIONS & EXTENSION LEAD ROUTING.....	NF-36790
6.	FCD RHR SYSTEM.....	NX-7905-6-1 THRU 3
7.	FCD RECIRC. FLOW CONTROL SYSTEM VENDOR DWG. 729E203 IN TECH. MANUAL	NX-7831-411
8.	FCD HPCI SYSTEM.....	NX-8292-15-1 THRU 3
9.	FCD RCIC SYSTEM.....	NX-7822-60-1 THRU 3
10.	FCD CORE SPRAY SYSTEM.....	NX-7833-3
11.	ELEMENTARY DIAGRAM R.V. TEMP. MONITOR.....	NX-7831-178



PEN.	XFV	PEN.	XFV
X-40A-A	XFV-27	X-40C-D	XFV-42
X-40A-B	XFV-28	X-40C-E	XFV-44
X-40A-C	XFV-29	X-40C-F	XFV-44
X-40A-D	XFV-30	X-40D-A	XFV-45
X-40A-E	XFV-31	X-40D-B	XFV-46
X-40A-F	XFV-32	X-40D-C	XFV-47
X-40B-A	XFV-33	X-40D-D	XFV-48
X-40B-B	XFV-34	X-40D-E	XFV-49
X-40B-C	XFV-35	X-40D-F	XFV-50
X-40B-D	XFV-36		
X-40B-E	XFV-37		
X-40B-F	XFV-38		
X-40C-A	XFV-39		
X-40C-B	XFV-40		
X-40C-C	XFV-41		

<i>This map/document is to assist employees in the performance of their jobs. Your personal safety is provided for by using safety practices, procedures and equipment as described in safety training programs, manuals and SPAR's.</i>		M-116-1
P & ID JET PUMP INSTRUMENTATION NUCLEAR BOILER SYSTEM		MONTE CAD DWG 'A
MONTECELLO NUCLEAR GENERATING PLANT	SCALE: NONE	REV 81
 Xcel Energy[™] NORTHERN STATES POWER COMPANY	NH-36242-1	



- NOTES:**
1. INSTRUMENT LINES TO SLOPE A MINIMUM OF 1/2 INCH PER FOOT TOWARDS INSTRUMENT EXCEPT FOR REACTOR WATER LEVEL INSTRUMENT LINES WHICH MUST HAVE A MINIMUM SLOPE OF 1/4 INCH PER FOOT. INSTRUMENT WATER LINES MUST NOT HAVE AIR TRAPS, AND STEAM LINES MUST NOT HAVE WATER TRAPS.
 2. LINES TO DIFFERENTIAL PRESSURE TRANSMITTERS SHOULD BE AS SHORT AS PRACTICABLE.
 3. VALVES TO BE LOCATED IN IMMEDIATE VICINITY OF INSTRUMENT PANELS SHOWN ON ARRANGEMENT DRAWING.

- REFERENCE DRAWINGS:**
1. IED FEEDWATER CONTROL SYSTEM.....NX-7832-3-1 THRU 6
 2. IED NEUTRON MONITORING SYSTEM.....NX-7830-2-1 & 2, NX-7830-4-1 THRU 4
 3. FDC NUCLEAR BOILER MISC SYSTEM.....NX-7831-58-1 & 2
 4. IED REACTOR PROTECTION SYSTEM.....NX-7834-1 & NX-7834-2-2
 5. R.P.V. THERMOCOUPLE LOCATIONS & EXTENSION LEAD ROUTING.....NF-36790
 6. FCD RHR SYSTEM.....NX-7905-6-1 THRU 3
 7. FCD RECIRC. FLOW CONTROL SYSTEM VENDOR DWG. 729E203 IN TECH. MANUAL NX-7831-411
 8. FCD HPCI SYSTEM.....NX-8292-15-1 THRU 3
 9. FCD ROC SYSTEM.....NX-7822-60-1 THRU 3
 10. FCD CORE SPRAY SYSTEM.....NX-7833-3
 11. ELEMENTARY DIAGRAM R.V. TEMP. MONITOR.....NX-7831-178

COLOR LEGEND					
—	ASME CLASS 1/QUALITY GROUP A				
—	ASME CLASS 2/QUALITY GROUP B				
—	ASME CLASS 3/QUALITY GROUP C				
—	QUALITY GROUP D				
—	SAFETY RELATED MECHANICAL				
—	SAFETY RELATED ELECTRICAL				
—	SPECIAL CONCERNS ITEM				

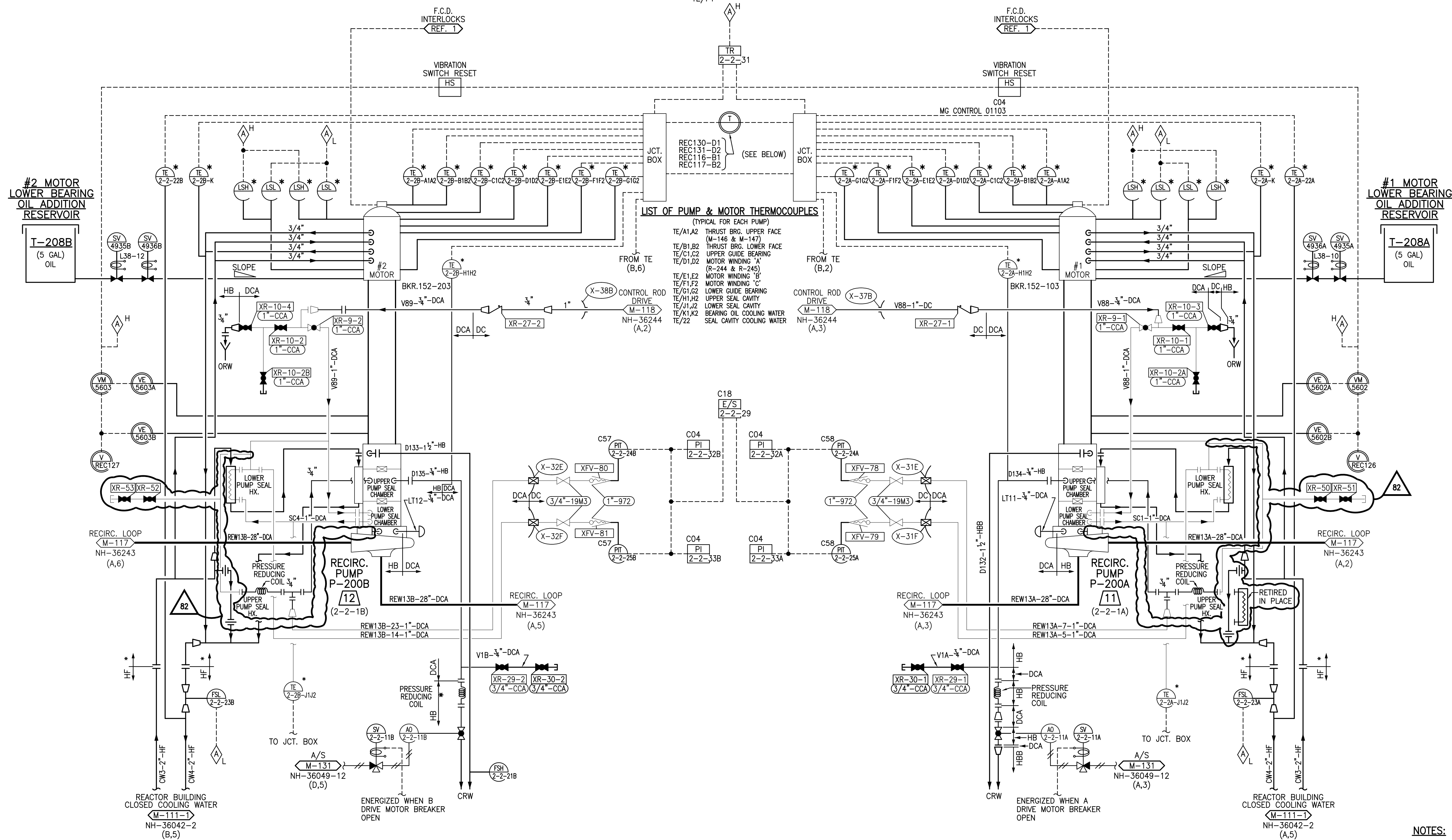
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 MONTICELLO NUCLEAR GENERATING PLANT UNIT 1	SIGNIFICANT NUMBER		8700	--	RX	1	4420	1	--
	GROUP		1	2	3	4	5	CL	6
	MONTICELLO NUCLEAR GENERATING PLANT P & ID REFERENCE LEG BACKFILL SYSTEM NUCLEAR BOILER SYSTEM								
	NORTHERN STATES POWER COMPANY MINNEAPOLIS						SCALE: NONE		

THERMOCOUPLES RECORDED
PER PUMP-MOTOR UNIT

TE/A1
TE/B1
TE/C1
TE/D1
TE/E1
TE/F1
TE/G1
TE/H1
TE/J1
TE/K1
TE/L1
TE/M1
TE/N1
TE/O1
TE/P1
TE/Q1
TE/R1
TE/S1
TE/T1
TE/U1
TE/V1
TE/W1
TE/X1
TE/Y1
TE/Z1

*NOTE 2



NOTES:

- THIS WAS REDRAWN FROM P&ID M-117 (NH-36243) REV. M2 AND INCORPORATES CHANGES AND AS BUILT INFORMATION BASED ON THE RECIRCULATION PIPING REPLACEMENT PROGRAM.
- THE PRIMARY THERMOCOUPLE FOR THE B RECIRC #1 SEAL CAVITY FAILED A NEW WIRE WAS INSTALLED IN J10 SUCH THAT THE B RECIRC IS NOW FED FROM THE SPARE THERMOCOUPLE J2.

REFERENCE DRAWINGS:

- RECIRCULATION FLOW CONTROL F.C.D. (GE 729E203) 5828-APED-2A-7 8C8 (DRAWING IS IN TECH. MANUAL NX-7831-411)

COLOR LEGEND

ASME CLASS 1/QUALITY GROUP A
ASME CLASS 2/QUALITY GROUP B
ASME CLASS 3/QUALITY GROUP C
QUALITY GROUP D
SAFETY RELATED MECHANICAL
SAFETY RELATED ELECTRICAL
SPECIAL CONCERNS ITEM

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M-117

MONTI CAD DWG 'D'

P&ID RECIRC LOOPS, PUMPS & MOTORS
NUCLEAR BOILER SYSTEM

MONTICELLO NUCLEAR GENERATING PLANT

SCALE: NONE

REV 82

Xcel Energy
NORTHERN STATES POWER COMPANY

NH-36243-1