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AUTH.NAME AUTHOR AFFILIATION
HINTZ,D.C. Wisconsin Public Service Corp.
RECIP.NAME RECIPIENT AFFILIATION
VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Forwards Reg Guide 1.97 review committee progress rept re instrument qualifications necessary to monitor plant conditions during & following accident,per 850628 commitment.Next progress rept will be forwarded in May 1986.

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TITLE: OR/Licensing Submittal: Suppl 1 to NUREG-0737(Generic Ltr 82-33)

NOTES: see '85 Reports 05000305
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NRC-85-166

WISCONSIN PUBLIC SERVICE CORPORATION
P.O. Box 19002, Green Bay, WI 54307-9002

October 31, 1985

Director of Nuclear Reactor Regulation
Attention: Mr. S. A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
TAC #M5100
Accident Monitoring Instrumentation

Reference: 1) Letter from D. C. Hintz to S. A. Varga dated June 28, 1985

Reference 1 outlined the method the Regulatory Guide 1.97 (RG 1.97) group used to determine which instruments were necessary to monitor the conditions of the Kewaunee Nuclear Power Plant during and following an accident. The submittal also listed those instruments along with their present level of qualification. In that submittal we stated that the RG 1.97 Review Committee would review that list and provide recommendations concerning the instruments and their level of qualification. Finally, we committed to supplying the NRC with a progress report in October of 1985.

This submittal provides that progress report as follows:

- o Attachment 1 to this letter is an update of attachment 1 to reference 1.
- o Attachment 2 to this letter is an update of attachment 2 to reference 1.
- o Attachment 3 to this letter lists all the instruments listed in reference 1 along with the recommendations made by the RG 1.97 Review Committee.

A progress report on the actions taken to implement the recommendations of the RG 1.97 Review Committee will be sent to the NRC in May of 1986, after our refueling outage.

A003
1/1

Sincerely,

D. C. Hintz
Manager - Nuclear Power

TJW/js

cc - Mr. Robert Nelson, US NRC

50-305

REG GUIDE 1.97 REVIEW COMMITTEE PROGRESS RPT.

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Attachment 1 to the Letter

From

D. C. Hintz (WPSC)

To

S. A. Varga (NRC)

Dated October 31, 1985

Attachment 1

STATUS INDICATIONS

AC emergency bus power indication (buses 1-5 and 1-6)
AFW MD pumps status indication
CCW pumps status indication
Containment fan coil indication
High-head SI pumps
ICS pump status indication
Low-head SI pumps status indication
Neutron flux indication
Reactor trip and bypass breaker position indications
SW pumps status indication

PRESSURE

Containment pressure indication
Pressurizer pressure indication
RCS pressure indication
SG pressure indication

FLOW

Steam flow indication

POSITION INDICATIONS

AFW TD pump steam supply valves position indication

SI recirculation valves:

RHR-300A(B)
SI-5A(B)
SI-9A(B)
SI-11A(B)
SI-208
SI-209
SI-300A(B)
SI-350A(B)
SI-351A(B)

Containment fan coil SW valves indicating lights
Containment isolation valves position indication
Main FW isolation valves
Main steamline isolation and bypass valves

Position indications for:

CC-400A(B)
CC-600
CC-601A(B)
CC-610A(B)
CC-612A(B)

ICS recirculation valve position [RHR-400A(B)]
ICS injection valve position [ICS-5A(B) and ICS-6A(B)]

PRZR PORVs and block valves position indication

LEVEL

BAT level indication
PRZR level indication
RWST level indication
SG narrow range level indication

TEMPERATURE

Core exit T/Cs temperature indication
RCS average temperature indication
RCS cold leg temperature indication
RCS hot leg temperature indication

CONCENTRATION

Containment hydrogen concentration

Attachment 2 to the Letter

From

D. C. Hintz (WPSC)

To

S. A. Varga (NRC)

Dated October 31, 1985

VARIABLE: AC Emergency Busses Power Indication

ID(S): 46636 46637 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 2 .

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: on/off

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): +

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): *

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on the Electrical Control Console
Control Room Indication - Indicating Lights
EOF and TSC Indication - None
Power Supply Drawings - E1801, E1800, E799
*Instrument seismically qualified to the relay room.
However, it is not seismically qualified from the relay room
to the control room.
+Instrument is located in a mild environment; therefore,
environmental qualification is unnecessary.

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Aux FW MD Pump Indication

ID(S): 46111 46112 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: on/off

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): *

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console A
System - 58
*The instrument is located in a mild environment; therefore, environmental qualification is unnecessary.
Power Supply Drawings - E1038, E1037, E1036, E844, E233, E1808, E798
Control Room Indication - Indicating Lights
EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Component Cooling Water Pump Indication

ID(S): 46301 46302 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: on/off

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): *

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console C
System - 31
*Instrument is located in a mild environment; therefore, environmental qualification is unnecessary.
Control Room Indication - Indicating Lights
EOF and TSC Indication - None
Power Supply Drawings - E1816, E798, E1082, E1815, E799, E1089

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Fan Coil Indicating Lights

ID(S): 46539 46540 46541 46542

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: on/off

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): *

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Vertical Panel A
System - 18
Flow Diagram - M602
*The instrument is located in a mild environment; therefore, environmental qualification is unnecessary.
Power Supply Drawings - E3116, E3115, E1080, E844, E233
Control Room Indication - Indicating Lights
EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: SI Pump Indication

ID(S): 46307 46308 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: on/off

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): *

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console C
System - 33
*The instrument is located in a mild environment; therefore, environmental qualification is unnecessary.
Power Supply Drawings - E1818, E798, E492, E1042, E1041, E1040, E1039, E1038, E1037, E1036, E844, E233
Control Room Indication - Indicating Lights
TSC and EOF Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: ICS Pump Indication

ID(S): 46305 46306 - -

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: on/off

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: -
LOWER LIMIT: -
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): *

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console C
Flow Diagram - M217
System - 23
*The instrument is located in a mild environment; therefore, environmental qualification is unnecessary
Power Supply Drawing - E1817, E798, E548
Control Room Indication - Indicating Light
EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: RHR Pump Indication

ID(S): 46303 46304 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: on/off

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): *

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console C
System - 34
*The instrument is located in a mild environment; therefore, environmental qualification is unnecessary.
Power Supply Drawing - E1036, E844, E233
Control Room Indication - Indicating Lights
EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Neutron Flux - Source Range

ID(S): 4122901 4122902 41229033 4122904
28043 28037 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E-03
LOWER LIMIT: 1.00E-09
UNITS: %POWER

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 1.00E-06
UNITS: %POWER

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): N

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console B
P.O. - XK100
System - 48
Control Room Indication - 0 to 1.00E06 CPS
Power Supply Drawings - E804, E800, E525, E845, E233
Control Room Readout - Real Time Display and Computer Print Out.
EOF and TSC Readout - Computer Print Out

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Neutron Flux - Intermeidate Range

ID(S): 4122801 4122802 4122803 4122804
28044 28038 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 1.00E-06
UNITS: %POWER

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 1.00E-06
UNITS: %POWER

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): N

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console B
P.O. - XK100
System - 48
Control Room Indication - 1E-11 to 1E-03 amp.
Power Supply Drawings - E804, E525, E800, E845, E233
Control Room Readout - Real Time Display and Computer Print Out.
EOF and TSC Readout - Computer Print Out.

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Neutron Flux - Power Range

ID(S): 4122601 4122602 4122603 4122604
28041 28047 28045 28039

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.20E+02
LOWER LIMIT: 1.00E-01
UNITS: %POWER

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 1.00E-06
UNITS: %POWER

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): N

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console B
P.O. - XK100
System - 48
See Reactor Power Recorder 42585
Power Supply Drawings - E804, E525, E800, E845, E233
Control Room Readout - Real Time Display and Computer Print Out
EOF and TSC Readout - Computer Print out

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Reactor Trip and Bypass Status

ID(S): 4456201 4456202 4456203 4456204

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:	REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00	UPPER LIMIT: .
LOWER LIMIT: 0.00E+00	LOWER LIMIT: .
UNITS: GL/RL	UNITS:

EQUIPMENT QUALIFICATION:	SEISMIC QUALIFICATION:
EQ REQUIRED (Y/N): Y	SEISMIC QUAL. REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): *	SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Vertical Panel B
System - 47
*The instrument is located in a mild environment; therefore, environmental qualification is unnecessary.
Power Supply Drawings - E2499, E844, E233
Control Room Indication - Indicating Lights
EOF and TSC Indication - None

INDICATION TYPES	POWER SUPPLY TYPES
1 -- LOCAL READOUT	1 -- SAFETY GRADE
2 -- LOCAL RECORDER	2 -- HIGHLY RELIABLE
3 -- BOTH 1 & 2	3 -- OFFSITE POWER
4 -- REMOTE READOUT	
5 -- REMOTE RECORDER	
6 -- BOTH 4 & 5	
7 -- SEE NOTES	

VARIABLE: Service Water Pump Indication

ID(S): 46524 46525 46526 46527

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: on/off

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): *

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Vertical Panel A
System - 2
*The instrument is located in a mild environment; therefore, environmental qualification is unnecessary.
Control Room Indication - Indicating Lights
EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Pressure (0-60)

ID(S): 4150504 4150505 4150506 21117
21118 21119 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 6.00E+01
LOWER LIMIT: 0.00E+00
UNITS: PSID

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.84E+02
LOWER LIMIT: -5.00E+00
UNITS: PSID

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): *

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Located on Mechanical Vertical Panel A / System 18
Flow Diagram - M602 / P.O. - XK100 / R.G. 1.97 Required
Range = -5 psig to 4x (Design Pressure) / Design Pressure = 46 psig (FSAR pg 5.2-1)
*The transmitter and the cabling to the relay room are seismically qualified. The cabling from the relay room to the indicator is not seismically qualified.
Power Supply Drawings - E828, E675, E845, E233
Control Room Indication - Real Time Display and Computer Print Out
EOF Indication - Computer Print Out
TSC Indication - Printer and Computer Print Out

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: RCS Pressure (Pressurizer Pressure)

ID(S): 4122201 4122202 4122301 4122302
42301 21079 21082 .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 2.50E+03
LOWER LIMIT: 1.70E+03
UNITS: PSIG

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): *

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Mechanical Control Console B
Flow Diagram - XK100-10
P.O. - XK100
System - 36
*The transmitter and the cabling from transmitter to relay room are seismically qualified. The cabling from the relay room to the indicator is not seismically qualified.
Design Pressure - 2485 psig (S.D. 36-3 & Dwg. XK100-2)
Control Room Indication - Real Time Display and Computer Print Out.
EOF and TSC Indication - Computer Print Out

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: RCS Hot Leg Pressure

ID(S): 4130101 4130102 42556 4255601
4256602 21077 21038 .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1/2

PLANT INSTRUMENT RANGE:	REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 3.00E+03	UPPER LIMIT: 3.00E+03
LOWER LIMIT: 0.00E+00	LOWER LIMIT: 0.00E+00
UNITS: PSIG	UNITS: PSIG

EQUIPMENT QUALIFICATION:	SEISMIC QUALIFICATION:
EQ REQUIRED (Y/N): Y	SEISMIC QUAL. REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y	SEISMICALLY QUALIFIED (Y/N): *

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 2

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Located on MVPA and MCCC / P.O. - 95543
System - 36
RCS Design Pressure - 2485 psig (FSAR Table 4.1-1)
*Trans. 21038 and its cabling to relay room are seismically qualified; 21077 is seismically qualified, but the cabling to its indicator is not.
Power Supply Drawings - E829, E783, E702, E845, E233
Control Room Indication - Real Time Display (4130101 and 4130102) and Computer Link
EOF and TSC Indication - Computer Print Out

INDICATION TYPES	POWER SUPPLY TYPES
1 -- LOCAL READOUT	1 -- SAFETY GRADE
2 -- LOCAL RECORDER	2 -- HIGHLY RELIABLE
3 -- BOTH 1 & 2	3 -- OFFSITE POWER
4 -- REMOTE READOUT	
5 -- REMOTE RECORDER	
6 -- BOTH 4 & 5	
7 -- SEE NOTES	

VARIABLE: Steam Generator Header Pressure

ID(S): 4104901 4104902 4104903 4105301
4105302 4105303 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.40E+03
LOWER LIMIT: 0.00E+00
UNITS: PSIG

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.29E+03
LOWER LIMIT: 0.00E+00
UNITS: PSIG

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): *

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
ON Mechanical Control Console A
P.O. - XK34233
System - 6
R.G. 1.97 Require Range - Opsig to 1.2 x (lowest safety valve setting).
Lowest Relief Valve Setting = 1074 psig (FSAR page 10.2-7).
Transmitters - 21094 21095 21096 21097 21098 21099
*Transmitter & cabling to relay rm is seismically qualified.
Cabling from relay room to indicator is not seismically qualified.
Control Room Readout - Real Time Display and Computer Print Out
EOF INDICATION - COMPUTER PRINT OUT
TSC INDICATION - STRIP CHART & COMPUTER PRINT OUT
POWER SUPPLY DRAWINGS - E828, E673, E845, E233

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Main Steam Flow

ID(S): 4105001 4105002 4105101 4105102
23001 23005 23002 23007

REGULATORY GUIDE CATEGORY: 2
REGULATORY GUIDE TYPE: D
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 4.50E+00
LOWER LIMIT: 0.00E+00
UNITS: MPPH

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 4.50E+00
LOWER LIMIT: 0.00E+00
UNITS: MPPH

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Located on Mechanical Control Console A
Design Flow Rate - 4.07 MPPH (FSAR p. Table 10.1-1)
Flow Diagram - M203
P.O. - XK3425
System - 6
Control Room Readout - Real Time Display, Computer Print Out
EOF and TSC Readout - Computer Print Out
Power Supply Drawings - E828, E788, E673, E845, E233

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Aux FW TD Pump Steam Supply Valve Pos.

ID(S): 46113 46114 46118 32038
32039 32040 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1 .

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: op/cl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): N
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console A
Valves MS 100A, MS 100B, and MS102
System - 50
Flow Diagram - M203
PO - K204
Power Supply Drawings - E1486, E1986, E843, E233
Control Room Indication - Indicating Lights
EOF and TSC Indication - None
Redundancy not required at the component level. Redundancy is provided at the system level.

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: SI Recirculation Valve's Position Indication

ID(S): . . . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: op/cl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: op/cl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	PS	ID
SI .9A	1	Y	1	32094; 46381
SI 9B	1	Y	1	32095; 46382
SI 11A	1	Y	1	32092; 46383
SI 11B	1	Y	1	32097; 46384
SI 208	1	Y	1	32131; 46392
SI 209	1	Y	1	32130; 46391
SI 300A	1	Y	1	32111; 46361
SI 300B	1	Y	1	32112; 46362
SI 350A	1	Y	1	32102; 46355
SI 350B	1	Y	1	32103; 46356
SI 351A(B)	1	Y	1	32113; 46357 (32114; 46358)
SI 5A	1	Y	1	32107; 46379
SI 5B	1	Y	1	32108; 46380
RHR 300A	1	Y	1	32134; 46363
RHR 300B	1	Y	1	32135; 46364

EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Fan Coil SW Valves Position

ID(S): 46509 46510 46511 46512
32060 32061 32058 32059

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: op/cl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Vertical Panel A
Valves - SW 903A, SW 903B, SW 903C, SW 903D
Flow Diagram - M202
System - 2
Power Supply Drawings - E627, E3259
EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (Containment)

ID(S): . . . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: .
TSC: .

NOTES:

Valve	QA	EQ	SQ	PS	ID
AS 1	1	Y	N	1	31383-01,02; 46563
AS 2	1	Y	N	1	31384-01,02; 46564
AS 32	1	Y	N	1	31385-01,02; 46565
CVC 54	1	Y	Y	1	33651; 46968
MD(R) 323A	1	Y	Y	1	32391; 46967
MD(R) 323B	1	Y	Y	1	32390; 46966
VB 10A	1	Y	Y	1	31337,01,02; 46828
VB 10B	1	Y	Y	1	31338; 46829
WG 311	1	Y	Y	1	33654; 46972
WG 310	1	Y	Y	1	33655; 46971

All have Control Room Indication.
NO EOF OR TSC INDICATION.

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (CVC Letdown)

ID(S): 46234 46235 46236 46233

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: E
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	SQ	PS	ID
LD 4A	1	Y	Y	1	31231-01,02; 46234
LD 4B	1	Y	Y	1	31232-01,02; 46235
LD 4C	1	Y	Y	1	31233-01,02; 46236
LD 6	1	Y	Y	1	31234-01,02; 46233

All have Control Room Indication
No EOF or TSC Indication
System - 35

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (Excess Letdown HX)

ID(S): 46338 32082 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Valve - CC 653
No Indication in the EOF or TSC

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (Instrument Air System)

ID(S): 46594 3130901 3130902 .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 2

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Valve IA 101
Flow Diagram - M213
The valve is seismically qualified; however, the limit switches and the cabling from the limit switches to the control room are not. The limit switches will be replaced by the end of the 1988 refueling outage per DCR 1522.
No Indication in EOF or TSc.
Check valves inside and outside containment provide the containment isolation function.

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (ICS System)

ID(S): 46419 46418 31273 31272

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: E
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valves	QA	EQ	SQ	PS	IDs
ICS 201	1	Y	N	1	31273; 46419
ICS 202	1	Y	N	1	31272; 46418

EOF and TSC Indication - None
Flow Diagram - M217
System - 23
P.O. - K267

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (Primary Sampling System)

ID(S): - - - -

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	SQ	PS	ID
RC 403	1	Y	N	1	31267-01,02; 46544-01,02
RC 402	1	Y	Y	1	31263-01,02; 46805-01,02
RC 413	1	Y	N	1	31268-01,02; 46544-03,04
RC 412	1	Y	Y	1	31264-01,02; 46806
RC 422	1	Y	Y	1	33092; 46804,01,02
RC 423	1	Y	Y	1	33327; 46544-05,06

No EOF or TSC Indication
System - 37

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (Purge and Ventilation)

ID(S): . . . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	SQ	PS	ID
RBV 1	1	Y	Y	1	31125; 46598-01,02
RBV 2	1	Y	Y	1	31126; 46596-01,02
RBV 3	1	Y	Y	1	31124; 46595-01,02
RBV 4	1	Y	Y	1	31123,01,02; 46597

All have Control Room Indication.
No Indication in EOf or TSC.
Flow Diagram - M602

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (PRT)

ID(S): . . . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: E
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	SQ	PS	ID
MG(R) 513	1	Y	N	1	31260,01,02; 46808
MG(R) 512	1	Y	N	1	31259,01,02; 46807
NG 302	1	Y	N	1	31298,01,02; 46365
MU 1010-1	1	Y	N	1	31261; 46801

All have Control Room Indication
No EOF or TSC Indication
System - 36
Flow Diagram - XK100-10

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (RCDT)

ID(S): 46310 46309 46330 46329
46368 46367 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	SQ	PS	ID
MG(R)510	1	Y	N	1	31133,01,02; 46310
MG(R)509	1	Y	N	1	31132,01,02; 46309
MG(R)504	1	Y	N	1	31217,01,02; 46330
MG(R)503	1	Y	N	1	31216,01,02; 46329
RC 508	1	Y	N	1	31135,01,02; 46368
RC 507	1	Y	N	1	31134,01,02; 46367

All have Control Room Indication
No EOF or TSC Indication
System - 32
Flow Diagram - XK100-131

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (RCP)

ID(S): . . . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	SQ	PS	IDs
CVC 211	1	Y	Y	1	32124; 46211
CVC 212	1	Y	Y	1	32115; 46214

Both have control room indication. No EOF or TSC indication.
System - 35
Flow Diagram - XK100-35

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (Steam Generator)

ID(S): . . . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	SQ	PS	ID
BT 2A	1	Y	Y	1	32077; 46131
BT 2B	1	Y	Y	1	32079; 46133
BT 3A	1	Y	Y	1	32078; 46132
BT 3B	1	Y	Y	1	32080; 46134
BT 31A	1	Y	Y	1	31334; 46135
BT 31B	1	Y	Y	1	31270; 46135
BT 32A	1	Y	N	1	31335; 46140
BT 32B	1	Y	N	1	31271; 46140

EOF and TCS Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Isolation (Sump A)

ID(S): 46811 46812 31136 31137

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: E
QA TYPE: 1

PLANT INSTRUMENT RANGE:	REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00	UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00	LOWER LIMIT: 0.00E+00
UNITS: cl/ncl	UNITS: cl/ncl

EQUIPMENT QUALIFICATION:	SEISMIC QUALIFICATION:
EQ REQUIRED (Y/N): Y	SEISMIC QUAL. REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y	SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	SQ	PS	IDs
MD(P) 134	1	Y	N	1	31136; 46811
MD(P) 135	1	Y	N	1	31137; 46812

Both have Control Room indication.
System - 32A
Flow Diagram - XK100-131

INDICATION TYPES	POWER SUPPLY TYPES
1 -- LOCAL READOUT	1 -- SAFETY GRADE
2 -- LOCAL RECORDER	2 -- HIGHLY RELIABLE
3 -- BOTH 1 & 2	3 -- OFFSITE POWER
4 -- REMOTE READOUT	
5 -- REMOTE RECORDER	
6 -- BOTH 4 & 5	
7 -- SEE NOTES	

VARIABLE: Containment Isolation (SI Accumulators N2 Supply)

ID(S): 46376 31253 . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Valve NG 107
No EOF or TSC Indication
System - 33
Flow Diagram - XK100-28

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Feedwater Isolation Valve Position

ID(S): 46119 46120 32015 32016

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:	REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00	UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00	LOWER LIMIT: 0.00E+00
UNITS: op/cl	UNITS: op/cl

EQUIPMENT QUALIFICATION:	SEISMIC QUALIFICATION:
EQ REQUIRED (Y/N): Y	SEISMIC QUAL. REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y	SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	PS	ID
FW 12A	1	Y	1	32015; 46119
FW 12B	1	Y	1	32016; 46120

System - 5A
Flow Diagram - M205
Control Room Indication - Indicating Lights
EOF and TSC Indication - None
Power Supply Drawings - E627, E3081, E3077

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: MS and Bypass Isolation Valve Position

ID(S): 46136 46137 46107 46108

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1 .

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: op/cl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: op/cl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N):

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): *

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: .

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	PS	SQ	ID
MS 1A	1	Y	2	Y	31015; 46136
MS 1B	1	Y	2	Y	31016; 46137
MS 2A	1	N	1	N	32007; 46107
MS 2B	1	N	1	N	32008; 46108

The selinoid valves that control MS 1A(B) have Type 1 power supply.
Control Room Indication - Indicating Lights
EOF and TSC Indication - None
Flow Diagram = M203

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Component Cooling Valves

ID(S): 46337 46334 46336 46331
46332 46333 46335 .

REGULATORY GUIDE CATEGORY: 1
REGULATOPY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS:

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:

Valve	QA	EQ	PS	SQ	IDs
CC 600	1	Y	1	Y	32088; 46337
CC 601A	1	Y	1	Y	32084; 46334
CC 601B	1	Y	1	Y	32085; 46336
CC 610A	1	N	1	Y	31127; 46331
CC 610B	1	N	1	Y	31128; 4633201,02
CC 612A	1	Y	1	Y	32086; 46333
CC 612B	1	Y	1	Y	32087; 46335
CC 400A	1	Y	1	Y	32119; 46343
CC 400B	1	Y	1	Y	32120; 46344

Control Room Indication - Indication Lights
EOF and TSC Indication - None
Flow Diagram XK100-20

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: ICS Recirculation Valve Position

ID(S): 46322 46323 32125 32126

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:	REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00	UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00	LOWER LIMIT: 0.00E+00
UNITS: op/cl	UNITS: op/cl

EQUIPMENT QUALIFICATION:	SEISMIC QUALIFICATION:
EQ REQUIRED (Y/N): Y	SEISMIC QUAL. REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y	SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
BHR 400A (B)
Located on Mechanical Control Console C
Flow Diagram - M217
System - 23
Power Supply Drawings - E1374
Control Room Indication - Indicating Lights
EOF and TSC Indication - None

INDICATION TYPES	POWER SUPPLY TYPES
1 -- LOCAL READOUT	1 -- SAFETY GRADE
2 -- LOCAL RECORDER	2 -- HIGHLY RELIABLE
3 -- BOTH 1 & 2	3 -- OFFSITE POWER
4 -- REMOTE READOUT	
5 -- REMOTE RECORDER	
6 -- BOTH 4 & 5	
7 -- SEE NOTES	

VARIABLE: ICS Injection Valves (ICS-5A(B), 6A(B))

ID(S): 46351 46353 46352 46354
32066 32068 32067 32069

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: OP/C1

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console C
Flow Diagram - M217
System - 23

Valve	EQ	SQ	PS	
ICS 5A	Y	Y	1	46351; 32068
ICS 5B	Y	Y	1	46353; 32068
ICS 6A	Y	Y	1	46352; 32067
ICS 6B	Y	Y	1	46354; 32069

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Pressurizer PORV

ID(S): 46414 46415 31110 31109

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00
LOWER LIMIT: 0.00E+00
UNITS: cl/ncl

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Valves PR-2A and PR-2B
Flow Diagram - XK100-10
System - 36
Power Supply Drawings - E1523, E2301, E2301, E2300, E843, E233
Control Room Indication - Indicating Lights
EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Pressurizer Block Valves

ID(S): 46412 46413 32089 32090

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1/2

PLANT INSTRUMENT RANGE:	REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+00	UPPER LIMIT: .
LOWER LIMIT: 0.00E+00	LOWER LIMIT: .
UNITS: cl/ncl	UNITS:

EQUIPMENT QUALIFICATION:	SEISMIC QUALIFICATION:
EQ REQUIRED (Y/N): Y	SEISMIC QUAL. REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y	SEISMICALLY QUALIFIED (Y/N): Y

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): L

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Valves PR-1A and PR-1B
Flow Diagram - XK100-10
System - 36
Power Supply Drawings - E622, E796, E567
Control Room Indication - Indicating Lights
EOF and TSC Indication - None

INDICATION TYPES	POWER SUPPLY TYPES
1 -- LOCAL READOUT	1 -- SAFETY GRADE
2 -- LOCAL RECORDER	2 -- HIGHLY RELIABLE
3 -- BOTH 1 & 2	3 -- OFFSITE POWER
4 -- REMOTE READOUT	
5 -- REMOTE RECORDER	
6 -- BOTH 4 & 5	
7 -- SEE NOTES	

VARIABLE: Boric Acid Tank Level

ID(S): 4120501 4120502 4120503 4120504
4120601 4120602 4120603 4120604

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 0.00E+00
UNITS: %

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 0.00E+00
UNITS: %

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 4
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Control Console B
Transmitters - 24023, 24024, 24025, 24026, 24027, 24028, 24029
Tank Capacity - 4075 gallons
Indication is equivalent to a volume percent of 16.5% to 100% of the volume.

Flow Diagram - XK100-38
System - 35
P.O. - XK100, S.O. - 320, O.N. - 135085
Control Room Indication - Real Time Delay
EOF and TSC Indication - None

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Pressurizer Level

ID(S): 4122001 4122002 4122101 4230201
24032 24031 24030 .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: D
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 0.00E+00
UNITS: %

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 0.00E+00
UNITS: %

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): *

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Located on Mechanical Control Console B
System - 36
Flow Diagram - XK100-10
P.O. - XK43901-2
Required Range - Top to Bottom
Instrument Range corresponds to a 269.5" W.C.
Pressurizer Length 356.83".
*The transmitter and the cabling to the relay room is seismically qualified. The cabling from the relay room to the indicator is not seismically qualified.
Control Room Readout - Real Time Display, Strip Chart, and Computer Print Out.
EOF AND TSC READOUT - COMPUTER PRINT OUT.
POWER SUPPLY DRAWINGS - E828, E788, E845, E233

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Refueling Water Storage Tank Level

ID(S): 4131101 4131102 24040 24062

REGULATORY GUIDE CATEGORY: 2
REGULATORY GUIDE TYPE: D
QA TYPE: 2

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 0.00E+00
UNITS: %

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02
LOWER LIMIT: 0.00E+00
UNITS: %

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 2

INDICATION:
CONTROL ROOM: 6
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Console C
Flow Diagram - XK100-27
P.O. - XK34233, XK100
System - 33
Level Tap is 6 inches off the bottom, this gives a volume range of approximately 1% to 100%.
Transmitter 24040 is seismically qualified but its cabling to the control room is not.
Transmitter 24062 is not seismically qualified.
Control Room Readout - Real Time Display, Computer Printout
EOF and TSC Readouts - None
Power Supply Drawings - E829, E700, E845, F233, F1722, E846

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Steam Generator Level (Narrow Range)

ID(S): 4104801 4104802 4104803 4105201
4105202 4105203 42560 .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: D
QA TYPE: 1

PLANT INSTRUMENT RANGE:	REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+02	UPPER LIMIT: 1.00E+02
LOWER LIMIT: 7.50E+01	LOWER LIMIT: 0.00E+00
UNITS: %	UNITS: %

EQUIPMENT QUALIFICATION:	SEISMIC QUALIFICATION:
EQ REQUIRED (Y/N): Y	SEISMIC QUAL. REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y	SEISMICALLY QUALIFIED (Y/N): *

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
On Mechanical Control Console A
Flow Diagram - M203
P.O. - XK34233
System - 5
R.G. 1.97 required Range from Tube Sheet to Separator.
Transmitter - 24042 24043 24044 24046 24047 24048
*The transmitters and cabling to relay room are seismically qualified. The cabling from relay room to indicator is not seismically qualified.
Control Room Readout - Real Time Display, Computer Print Out and Strip Chart.

EOF READOUT - COMPUTER PRINT OUT.
TSC READOUT - STRIP CHART AND COMPUTER PRINT OUT.
POWER SUPPLY DRAWINGS - E788, E763, E845, E233

INDICATION TYPES	POWER SUPPLY TYPES
1 -- LOCAL READOUT	1 -- SAFETY GRADE
2 -- LOCAL RECORDER	2 -- HIGHLY RELIABLE
3 -- BOTH 1 & 2	3 -- OFFSITE POWER
4 -- REMOTE READOUT	
5 -- REMOTE RECORDER	
6 -- BOTH 4 & 5	
7 -- SEE NOTES	

VARIABLE: Core Exit Thermocouples

ID(S): 42595 13115 13153 .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: C
QA TYPE: 3

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 7.00E+02
LOWER LIMIT: 1.00E+02
UNITS: DEG F

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 7.00E+02
LOWER LIMIT: 5.00E+01
UNITS: DEG F

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): N

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 2

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Located on Mechanical Vertical Panel C
P.O. - XK100-1918
System - 55
Transmitter's ID - 13115 thru 13151 (39 transmitters)
Control Room Readout - Strip Chart and Computer Print Out
EOF Readout - Computer Print Out
TSC Readout - Strip Chart, Printer and Computer Print Out
Power Supply Drawings - E665, E780, E845, E233
System to be upgraded during 1986 refueling.
Upgrade was approved by the NRC in a letter dated
Nov. 30, 1984.

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: RCS Loop Tave.

ID(S): 4122401 4122402 4122501 4122502
15061 15062 15071 15072

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: A
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 6.29E+02
LOWER LIMIT: 5.20E+02
UNITS: DEG F

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: .
LOWER LIMIT: .
UNITS:

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): N

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Located on Mechanical Control Console B
Flow Diagram - XK100-10
P.O. - XK100
System - 47
Power Supply Drawings - E78°, E678, E845, E233
Control Room Indication - Real Time Display and Computer Print Out
EOF and TSC Indications - Computer Print Out

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: RCS Cold Leg Water Temperature

ID(S): 42555 4255501 4255502 15124
15126 . . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1/3

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 6.50E+02
LOWER LIMIT: 5.00E+01
UNITS: DEG F

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 7.00E+02
LOWER LIMIT: 5.00E+01
UNITS: DEG F

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 2

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Located on Mechanical Vertical Panel A
Flow Diagram - XK100-10
P.O. - XK100
System - 36
EOF and TSC Readouts via Computer Link
Power Supply Drawings - E2562, E701

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: RCS Hot Leg Water Temperature

ID(S): 42501 4250101 4250102 15123
15125 . . .

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: B
QA TYPE: 1/3

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 6.50E+02
LOWER LIMIT: 5.00E+01
UNITS: Deg. F

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 7.00E+02
LOWER LIMIT: 5.00E+01
UNITS: DEG. F

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 2

INDICATION:
CONTROL ROOM: 6
EOF: 6
TSC: 6

NOTES:
Located on Mechanical Vertical Panel A
Flow Diagram - XK100-10
P.O. - XK390
System - 54
RCS system design temperature - 650F (FSAR Table 4.1-6)
Power Supply Drawings - E829, E782, E702, E845, E233, E785
E3326
Control Room Indication - Strip Chart and Computer Printout
EOF and TSC Indications - Computer Printout

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

VARIABLE: Containment Hydrogen Concentration

ID(S):	41615	41616	64103	64153
	25019	25020	.	.

REGULATORY GUIDE CATEGORY: 1
REGULATORY GUIDE TYPE: C
QA TYPE: 1

PLANT INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+01
LOWER LIMIT: 0.00E+00
UNITS: %

REGULATORY GUIDE INSTRUMENT RANGE:
UPPER LIMIT: 1.00E+01
LOWER LIMIT: 0.00E+00
UNITS: %

EQUIPMENT QUALIFICATION:
EQ REQUIRED (Y/N): Y
EQ QUALIFIED (Y/N): Y

SEISMIC QUALIFICATION:
SEISMIC QUAL. REQUIRED (Y/N): Y
SEISMICALLY QUALIFIED (Y/N): N

REDUNDANCY:
REDUNDANCY REQUIRED (Y/N): Y
REDUNDANT? (Y/N): Y

POWER SUPPLY TYPE: 1

INDICATION:
CONTROL ROOM: 6
EOF: 7
TSC: 7

NOTES:
Located on Mechanical Vertical Panel A
Flow Diagram - M403
P.O. - XK05585
System - 18
Control Room Indication - Real Time Display & Computer Print Out.
EOF and TSC Indication - None
A display is also located outside the high radiation sample room.
Transmitter is seismically qualified; however, cabling from transmitter to control room indicator is not.

INDICATION TYPES
1 -- LOCAL READOUT
2 -- LOCAL RECORDER
3 -- BOTH 1 & 2
4 -- REMOTE READOUT
5 -- REMOTE RECORDER
6 -- BOTH 4 & 5
7 -- SEE NOTES

POWER SUPPLY TYPES
1 -- SAFETY GRADE
2 -- HIGHLY RELIABLE
3 -- OFFSITE POWER

Attachment 3 to the Letter

From

D. C. Hintz (WPSC)

To

S. A. Varga (NRC)

Dated October 31, 1985

Instrument	Recommendations
Aux Bldg airborne releases (R-13, R-14)	Deleted from the list since they are not associated with a Critical Safety Function (CSF).
Aux FW motor driven pump indication	None
Aux FW turbine driven pump supply valve (MS 102)	1.) To be complete valves MS-100A and MS-100B were added to the list. 2.) There are no recommendations concerning these valves.
AC emergency bus power indication (1-5, 1-6)	None
Boric acid tank level	Transmitter to be upgraded to meet seismic criteria.
Component cooling valves:	
CC-400A(B)	None
CC-600	None
CC-601A(B)	None
CC-610A(B)	Valve to be environmentally qualified. - recommendation placed on hold until WOG report on RCP seal failure is issued.
CC-612A(B)	None
Component cooling water pump indication	None
Condenser airborne releases (R-15)	Deleted from the list since it provides secondary information. Key information provided by SG level and samples.
Containment fan coil indication	None

Instrument	Recommendations
Containment fan coil SW valve indication (SW-903A(B)(C)(D))	None
Containment Hydrogen Concentration	Reroute cabling from analyzer to control room in seismically qualified trays.
Containment Isolation Valves.	
- Containment AS-1 AS-2 AS-3	None, since the limit switches for these valves are to be replaced by the end of the 1988 refueling outage per DCR 1522 and all noncompliance associated with RG 1.97 will be corrected.
CVC-54	None
MDR-323A(B)	None
VB-10A(B)	None
WG-310	None
WG-311	None
- CVC letdown LD-4A(B)(C)	None
LD-6	None
- Excess letdown CC-653	None
- Instrument Air IA-101	1.) Cabling from the valve to the control room and to its power supply should be upgraded to safeguards cabling. 2.) All other noncompliances associated with RG 1.97 will be corrected by the end of the 1988 refueling outage per DCR 1522.
- ICS ICS-201,202	Limit switches should be upgraded to meet seismic qualification criteria. This could be done by adding them to DCR-1522.

Instrument	Recommendations
- Primary Sampling	
RC-402	None
RC-403	None, since the limit switches for these valves are to be replaced by the end of the 1988 refueling outage per DCR 1522 and all non-compliance associated with RG 1.97 will be corrected.
RC-412	None
RC-413	None, since the limit switches for these valves are to be replaced by the end of the 1988 refueling outage per DCR 1522 and all non-compliance associated with RG 1.97 will be corrected.
RC-422	None
RC-433	None
- Purge and Ventilation	
RBV-1,2,3,4	None
RBV-5 TAV-12	Recommendation to be supplied later.
- PRT	
MG(R)-512, 513 MU-1010-1	None, since the limit switches for these valves are to be replaced by the end of the 1988 refueling outage per DCR 1522 and all non-compliance associated with RG 1.97 will be corrected.
NG-302	The valve's limit switches do not meet seismic qualification criteria. To correct non-compliance, they should be added to DCR 1522.
- RCDT	
MG(R)-503 MG(R)-504	The valve's limit switches do not meet seismic qualification criteria. To correct noncompliance, they should be added to DCR 1522.
MG(R)-509 MG(R)-510 RC-507 RC-508	None, since the limit switches for these valves are to be replaced by the end of the 1988 refueling outage per DCR 1522 and all non-compliance associated with RG 1.97 will be corrected.

Instrument	Recommendation
- RCP CVC-211, 212	None
- Steam Generator BT-2A(B)	None
BT-3A(B)	None
BT-31A(B)	None
BT-32A(B)	None, since the limit switches for these valves are to be replaced by the end of the 1988 refueling outage per DCR 1522 and all non-compliance associated with RG 1.97 will be corrected.
- Sump A MD(R)-134 MD(R)-135	None, since the limit switches for these valves are to be replaced by the end of the 1988 refueling outage per DCR 1522 and all non-compliance associated with RG 1.97 will be corrected.
- SI ACC N_2 Supply NG-107	Upgrade limit switches to meet seismic qualification criteria. Add to DCR 1522.
Containment pressure wide range (-5 to 200 psig)	Delete from list.
Containment pressure (0-30 psig)	Delete from list.
Containment pressure (0-60 psig)	None, based on the EOP's, this is the only range required; therefore, the others can be deleted.
Core exit temp.	None, all noncompliance will be corrected by DCR 1163.
FW isolation valves (FW-12A(B))	None
ICS pump indication	None

Instrument	Recommendation
ICS suction from RHR pump valve position	The instrument's name was changed to ICS recirculation valves (RHR-400A(B)).
ICS injection valves ICS-5A(B) ICS-6A(B)	1.) These valves were added to the list to verify ICS flow during an accident. 2.) There are no recommendations concerning these valves.
Main steam flow	None
Main steam isolation valves. (MS-1A(B))	1.) Cabling from limit switches to control room should be changed to safeguards cabling or present cabling routed in seismically qualified trays. 2.) Cabling from limit switches to power supply should be changed to safeguards cabling.
Main stem bypass valves (MS-2A(B))	1.) Should be environmentally qualified. 2.) Document seismic qualifications.
Neutron Flux Source Range Int. Range Power Range	Source and intermediate ranges should be upgraded to meet seismic and environmental qualification criteria.
Pressurizer block valves (PR-2A(B))	None
Pressurizer level	None
Pressurizer PORV (PR-1A(B))	None
Reactor trip and bypass breakers	None

Instrument	Recommendation
Refueling water storage tank level	1.) Cabling from transmitters to control room should be changed to safeguards cabling, or existing cabling should be routed in seismically qualified trays. 2.) Transmitter 24062 should be environmentally and seismically qualified.
RCS cold leg temp.	1.) Cabling from transmitters to power supply should be changed to safeguards cabling. 2.) All other noncompliances will be corrected by DCR 1521.
RCS hot leg Pressure	1.) Cabling from transmitter to control room should be routed in seismically qualified trays or be changed to safeguards cabling 2.) Cabling from transmitters to power supply. should be changed to safeguards cabling.
RCS hot leg temp.	1.) Cabling from transmitters to power supply should be changed to safeguards cabling. 2.) All other noncompliances will be corrected by DCR 1521.
RCS Flow	Deleted from list. Not a CSF instrument. It monitors the RCP which is not a safeguards instrument.
RCS loop Tave.	All noncompliances will be corrected by DCR 1521.
RCS potential dilution path (MU-1022)	Deleted from list. Critical safety function accomplished by neutron flux.

Instrument	Recommendation
RCS pressure (PRZR press.)	None
RHR pump indication	None
SG blowdown radiation monitor (R-19)	Deleted from list. Key variables are SG level and samples; not R-19.
SG header pressure	None
SG level	None
SI pump indication	None
SI recirculation valves	
RHR-300A(B)	None
SI-5A(B)	None
SI-9A(B)	None
SI-11A(B)	None
SI-208	None
SI-209	None
SI-300A(B)	None
SI-350A(B)	None
SI-351A(B)	None
SW pump indication	None